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Kingdom of Morocco — Republic of Tunisia Export Growth: Determinants and Prospects

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KINGDOM OF MOROCCO REPUBLIC OF TUNISIA

EXPORT GROWTH: DETERMINANTS AND PROSPECTS

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EXPORT GROWTH: DETERMINANTS AND PROSPECTS

EXECUTIVE SUMMARY

1. The Kingdom of Morocco and the Republic of Tunisia share many features of their recent economic development. During the 1980s, they managed to successfully adjust their economies while experiencing rising real GDP per capita. In both countries, the key source of growth was a shift from resource-based exports (phosphates in Morocco and oil in Tunisia) to manufactured exports. Both countries also registered a fall in the rate of growth of their exports' receipts in the early 1990s. This report will investigate why export growth has declined and indicate measures to promote it; and address the authorities' concern that such a decline might trigger measures of import and demand compression, thus reducing output growth, and weakening the support for further trade liberalization policies. The report follows up on the work initiated in two private sector assessments for both Morocco and Tunisia, recently prepared by the Bank with the support of the two countries' authorities, and integrates ongoing initiatives on the economic integration with the European Union (EU).

A. THE 1990-1992 EXPORT SLOWDOWN

2. During 1990-92, the average volume of merchandise exports fell by 2.6% per year in Morocco and grew only by 4.5% in Tunisia (relative to 8% and 9.1% during 1987-1990 in the two countries respectively). The slowdown in manufactured exports was even more pronounced: they decreased by 3.4% a year in volume terms in Morocco and grew only by 3.7% in Tunisia. Tunisia's better performance, however, should not be over-emphasized. First, it was sustained by exceptional sales of olive oil (which registered a 300% increase between 1990 and 1991). Second, contrary to Tunisia, reported trade statistics in Morocco do not include products transformed and exported under subcontracting arrangements, whose value added is recorded among services instead. Subcontracting exports (estimated from value added data) reached 26% of merchandise exports in 1992, up from only 11% in 1988. The inclusion of subcontracting would have made merchandise exports in Morocco grow at 0.9% a year during 1990-92 instead of the recorded 2.6% decline.

3. The empirical work presented in this report shows that the recent export slowdown can be largely attributed, in both countries, to sluggish demand due to the economic recession in the main destination markets, notably the EU. Competitiveness effects did play a role, but not a large one, particularly in Morocco, where the real appreciation of the dirham after 1990 was too minute to account for much of the export slowdown. Preliminary data indicate that in 1993 the volume of manufactured exports increased by 3.7% in Morocco and 5.1% in Tunisia. This was due to an increase in the demand for the goods exported by the two countries, e.g., clothing and agro-industrial products, and to a slight depreciation of

the real effective exchange rate in Tunisia. Despite the recent export slowdown, Morocco and Tunisia succeeded in retaining their aggregate share in the EU market for their manufactured exports. The Moroccan share in total manufacturing imports of the EU increased from 0.17% in 1980 to 0.316% in 1990 and 0.318% in 1992. Tunisia's share declined from 0.27% in 1980 to 0.26% in 1990, and then recovered to 0.309% in 1992.

B. REVIEWING THE EXPORT PUSH : A SUCCESS?

Economic structure

4. During 1980-1992 manufactured exports increased by 10.6% a year in Morocco and 9% in Tunisia. This sustained rate of growth was achieved through a combination of policies that fostered macroeconomic stability and increased the outward orientation of the two economies: internal and external discipline, exchange rate devaluation, reduction in import and tariff protection, fiscal and financial incentives and duty free access to imported intermediate and capital goods for exporters. Finally, other important determinants of the export success of Morocco and Tunisia during the 1980s were the privileged access to the European market granted through various Association Agreements with the EU and a sustained demand in the main destination markets especially in the late 1980s. However, did the export-oriented policies adopted by Morocco and Tunisia significantly change the economic structure of the two countries? The empirical evidence shows that the structure of the two economies still reflects the legacy of the import-substituting policies adopted in the past. Thus, the characteristics of exporting firms differ substantially from those of firms that sell in domestic markets. First, the exporting firms are larger and typically owned by or associated with a foreign enterprise. Some of these firms therefore have access to financial, technical and marketing expertise that enabled them to meet norms and standards of the importing markets. However, many exporting firms are off-shore enterprises operating under subcontracting arrangements in low-skilled activities such as garment assembly. The links between these firms and the local economy are tenuous, normally confined to labor and the use of infrastructure. Thus, they can easily relocate when the conditions offered by other countries become more favorable. Second, small firms are less likely to be or become exporters, probably because of the high entry and transaction costs of accessing foreign markets. Third, industrial linkages between exporting and non-exporting firms, or intra-sectoral, are weak. Thus, technical knowledge and export capabilities of larger firms are not disseminated to smaller firms that may have export potential. Finally, the export sector is characterized by a lack of product and market diversification.

5. However, there are also indications of a new dynamism and a higher interaction between producers for domestic and foreign markets. For example, enterprises data show that in recent years both entry and exit rates have increased, and the percentage of domestic sellers that became exporters has doubled. This result must be attributed to the effect of trade liberalization policies in changing the perception of profitable opportunities in the export sector. Econometric estimates of an export supply equation indicate a significant response of the export supply to the domestic terms of trade. A one percent increase in the ratio of export to domestic prices would lead to a 1.01% and 2.71% increase in the supply of exports in Morocco and Tunisia respectively. A decrease in domestic demand, measured by a fall in

the rate of capacity utilization, would increase the supply of exports, even at unchanged prices. This would happen through the switching of some firms from being domestic sellers to exporters and a decline in the share of output sold on the domestic market by partially exporting firms. These results highlight the crucial role that policy variables, by affecting domestic demand and prices, can play in promoting the supply of exports.

International Comparisons

6. The export performance of Morocco and Tunisia appears less satisfactory when compared to that of the Mediterranean, Eastern European and Asian countries that compete in the European market. The two Maghreb countries did manage to diversify their economies and acquire some new comparative advantages. However, competitors such as Turkey, Malaysia, Thailand, and, in recent years, the Eastern European countries, were much more successful. They managed not only to strengthen their traditional comparative advantages in labor-intensive products, but also to export new capital-intensive and higher value added products.

7. Cheap labor has traditionally been the key determinant of the competitiveness of Moroccan and Tunisian exports. Real wages are still low, relative to competitors, and they have been declining in recent years. But productivity (measured by value added per employee) is also low, so that the level of unit labor costs is relatively high. By contrast, countries like Turkey, the Philippines, Thailand and China have been able to combine low but increasing wages with a fast rise in productivity. The computation of labor costs in a common currency (the ECU), shows that during 1985 and 1990, both Morocco and Tunisia improved their price competitiveness against European competitors (Portugal, Greece, Hungary), but failed to catch up with the increased strength of Asian competitors (China, Malaysia, Indonesia) that had devalued their currencies much more. Finally, energy and transportation costs are high in the two Maghreb countries, particularly in Morocco. This decreases the profitability of exports and therefore the incentive for producing tradables.

C. A STRATEGY FOR EXPORT GROWTH

8. Competing for the long term in international markets is the major challenge facing Morocco and Tunisia if a high growth rate and improved living standards are to be achieved. This complex task will require: (i) maintaining sound macroeconomic policies and providing an environment that is competitive, and stimulates investments and the acquisition of technology; (ii) lowering trade barriers and increasing cooperation with Europe; (iii) strengthening the supply of exports, for example: enhancing firms capabilities to be flexible to changes in demand; broadening the existing comparative advantages and creating new ones; and improving cost competitiveness through higher productivity growth; and (iv) accumulating human and physical capital.

Maintaining Macroeconomic Stability

9. Evidence around the world points to the dominant role played by sound and competitive economic policies in promoting exports. Morocco and Tunisia have completed many of the policy reforms initiated in the early 1980s. Trade liberalization has lowered import protection and increased domestic competition; current account convertibility has helped access to foreign exchange; the structure of fiscal incentives has been streamlined and markets deregulated. Both countries now enjoy macro and political stability and a low inflation rate; and their governments are strongly committed to export growth.

10. The continuation and deepening of these policies is the most important prerequisite for success. Further financial sector liberalization, tax harmonizations, and reduction of administrative controls are some of the key actions necessary to improve the incentive framework of the private sector to stimulate export growth that, as already mentioned, have been suggested in the two private sector assessments recently prepared by the Bank for the two countries. Moreover, the finding in this report of a substantial responsiveness of export flows to price incentives in both countries highlights the crucial role of exchange rate policies in promoting export growth. The evolution of the real exchange rate, especially with respect to competing countries, should therefore be constantly monitored and an excessive real appreciation avoided through appropriate macroeconomic policy adjustments.

Lowering Trade Barriers and Increasing Cooperation with Europe

11. Trade liberalization has certainly increased import competition for many domestic firms. Quantitative restrictions have been virtually eliminated in Morocco and are expected to cover about 20% of domestic production by end 1994 in Tunisia. But nominal tariff and duty protection is still very high, reaching 50% (and higher values for certain agricultural goods) in Morocco and 73% in Tunisia. As already recommended in several Bank reports, lowering import protection is a necessary step to increase productivity and enhance quality, which are essential to achieve international competitiveness. But it is also becoming urgent because of the upcoming negotiations to upgrade the existing Association Agreements with the EU into "Free Trade Agreements"; and because the Eastern-European countries, that are directly competing with Morocco and Tunisia, already have low single digit tariff rates and will have full free trade with the EU by 2002 or earlier. Trade may simply move eastward unless Maghreb countries can match these liberalization moves. This is why the phase in period for lowering tariffs should not be longer than five years. Moreover, in order to reduce the inevitable trade diversion that would occur from a preferential liberalization vis-à-vis the EU, it would be important to lower trade barriers also against the rest of the world.

12. This report recommends the pursuit of increased cooperation with Europe and the speeding up of the negotiations for "Free Trade Agreements" with the E.U. However, it recognizes that the short-term benefits that would derive from such an agreement are minor: the Maghreb countries already enjoy duty free access to the European market for their industrial products and preferential access for their agricultural products. Vested interests in the EU will oppose any immediate opening of agricultural markets; and free movement of workers is unlikely even to be put on the negotiating agenda. By contrast, the costs of

lowering tariff protection in both countries may be high and the consequent restructuring of the economy painful.

13. The costs of maintaining the status quo, however, may be much higher. First, the benefits that derive from the existing Associations Agreements have been diluted by the granting of similar benefits to the Eastern European countries (in the recently negotiated "Europe Agreements"). Second, and most important, products that enter the EU market will be increasingly required to meet common industrial, environmental and safety standards. Achieving conformity with the new regulations will be easier with the full technical and financial cooperation of the EU.

14. The long-term benefits from a closer cooperation with Europe may be substantially higher than any short-term adjustment cost. These would come from: (i) an increased level of trade and foreign investment; (ii) the efficient working of a liberalized and open economy; (iii) reduced costs derived from the liberalization of services; and (iv) the adoption of industrial standards and certification and testing rules to conform to EU regulations.

Strengthening Export Supply

*15. **Strengthening the support to small firms.** Support mechanisms for providing technological and marketing services are believed to be important for the development of small and medium enterprises (SMEs), especially in export markets. But should governments provide such support? International experience indicates that private mechanisms, such as industrial and exporters' associations, chambers of commerce, and export traders can be more effective than public institutions with weak institutional capacity, bureaucratic structures and limited direct expertise. Pro-active efforts by governments to promote exports should be limited to financial assistance--as opposed to direct delivery services--to encourage the use of export-marketing supports and help establish associations that respond to the needs of SMEs; in turn, these associations should use these funds exclusively to provide export marketing and other services to the SMEs.*

*16. **Subcontracting.** Subcontracting agreements with foreign partners can be an important channel to accumulate industrial and technological experience from which local capacity can develop. Industrial and exporters' associations should help SMEs to actively seek and initiate subcontracting arrangements with strategic foreign industries. Moreover, technical assistance and quality control programs to increase the efficiency of local subcontractors should be introduced. This would strengthen the linkage with the domestic economy and, with time, help to upgrade some of the subcontracting relationships into full partnership relationships. Finally, investments abroad by Moroccan and Tunisian firms would help them to establish technology dissemination channels and to obtain shares in foreign markets.*

*17. **Industrial linkages.** To promote industrial linkages, public financial support could be reallocated to sustain development of industrial associations that provide common services to all members, particularly to small firms; and subcontracting relations between large and small firms. The incentive framework may also prove important. In Tunisia for example, the recently approved Unified Investment Code has extended to indirect exporters the fiscal*

advantages previously enjoyed only by exporters; this new framework should help to promote some integration between domestic producers and exporting firms.

18. ***Cost competitiveness.*** *Unit labor costs in Morocco and Tunisia are lower than in the European partners but higher than in Turkey and in the competing Asian countries. Morocco and Tunisia can no longer compete on the basis of cheap wages vis-à-vis countries like China or Indonesia that already have cheaper labor and are rapidly improving the quality of their products. Lower unit labor costs should be achieved through increased productivity, which requires upgrading technology and a more skilled labor force. Moreover, efforts to improve cost competitiveness should include lower energy and transportation costs. The case for advocating lower energy taxes is particularly strong in Morocco, as the price of energy is higher than in all competitor countries.*

19. ***Diversification.*** *The increase in the geographical and sectoral concentration of exports in both Morocco and Tunisia indicates the need for diversification. As the search for a radical and systematic market diversification may be long and costly, sectoral diversification should perhaps be the priority, through strengthening and broadening upstream segments in the export sectors. A diversified production structure and an export sector built on strong comparative advantages represent a necessary condition for a future geographical diversification. To sustain diversification efforts, many countries have adopted special "Funds" supported partly by the State and partly by exporters. In 1993, the "Société Marocaine d'Assurance à l'Exportation" proposed in Morocco the creation of a "Fonds de Promotion Economique Extérieure des Exportations" to finance the activities of the "Centre Marocain de Promotion des Exportations (CMPE), the main export promotion agency, to deal with the preparation and diffusion of documentation on foreign markets, and help to promote exports.*

20. International experience on the effectiveness of similar Funds is mixed. However, in Morocco, it would be advisable to let most current export promotion activities become private-supported. At the same time, the resources of such a Fund, if the proposal is implemented, could be geared to increasing the technological and export capabilities of all firms, particularly small ones. Public intervention in this domain may be justified because of the existence of informational and other market failures associated with the provision of financial, marketing and technical support to small firms. The development of a broader private, export-oriented sector composed of small and medium enterprises would imply less industrial concentration, a more flexible and competitive domestic economy and the creation of new job opportunities. This report suggests some ideas for a program for building export capabilities that could be financed by the Fund and tested on a pilot basis. The proposed program could provide assistance to potential exporters -- mostly small enterprises--to design and introduce their products in foreign markets. It would be based on a cost-sharing scheme with the participating firms, and managed by the two export promotion agencies, the CMPE in Morocco and the CEPEX (Centre Extérieur pour la Promotion des Exportations) in Tunisia, in close association with private sector groups. Finally, it would have to be of a short term nature, up to eight years, which is the maximum length of time allowed by the recent GATT agreement to phase out export subsidies.

Investing in Human and Physical Capital

21. The ability to compete and grow largely depends, in the long run, on the accumulation of human and physical resources. Evidence in this report shows two important areas that need increased investments, both public and private: these are human capital and infrastructure. Investments here may significantly improve the productivity of labor and the growth of the economy. Reducing the illiteracy rate should be a priority in both countries, but especially in Morocco. A second priority would be the improvement in technical education and training. Most of this training could be actively designed and managed by the private sector itself, with minimum involvement from the State.

22. Significant public investments may be required, especially in Morocco, to improve the quality of infrastructure services and expand the existing stock. Public investment may be insufficient, and complementary financing will be necessary. To this aim, private participation should be fostered by deregulating the provisions of these services, in particular in transport and communication; and by developing a framework for concession contracts with private investors. A better management of water, an increasingly scarce resource, is also a necessary condition to ensure private sector and export growth.

CHAPTER 1: INTRODUCTION

1.01. Morocco and Tunisia share many of the characteristics of their recent economic development. During the 1980s, they managed to successfully adjust their economies while maintaining rising incomes per capita. In both countries, the key source of growth was a shift from resource-based exports (phosphates in Morocco and oil in Tunisia) to manufacturing exports. Both countries registered a decline in the rate of growth of their exports' receipts in the early 1990s. This report will address the authorities' concern that such a decline could weaken the support for further trade liberalization policies as the two countries prepare to enter into free-trade agreements with Europe. This introductory chapter gives an overview of the structure of the economy in the two countries: Section A briefly describes the reforms undertaken in the 1980s; discusses the main changes in the structure of output and exports and compares the institutional framework for export promotion. Section B gives an outline of the report.

A. ECONOMIC STRUCTURE AND EXPORT PROMOTION

Adjustment and Liberalization Policies during the 1980s

1.02. Morocco's stabilization experience started with a period of contractionary monetary and fiscal measures (during 1983-86) which was followed by a gradual restoration of macroeconomic imbalances and a program of structural reforms to strengthen the supply response of the economy: trade and domestic prices liberalization, the deregulation of markets and a comprehensive financial and fiscal reform. By the end of 1992, the inflation rate was 5.7%, and the current account and the budget deficit had declined to 1.6% and 2.2% of GDP respectively.

1.03. Measures to reduce the anti-export bias inherited from the past resulted in a devaluation of the real effective exchange rate by 28.7% during 1980 and 1986. Import restrictions were gradually liberalized. While in the early 1980s quotas covered half of the imports, they were virtually eliminated in 1993. Tariffs were decreased from a range of 0-400% to 0-35% during the same period; a special import levy of 12.5%, replacing other duties, was added to tariffs in 1988 and then raised to 15% in 1993.[1] Reference prices, which were introduced as an instrument of protection, still cover about one-fifth of the imported products freed from ministerial authorization and one-tenth of manufactured goods.[2] Reference prices on imported goods are higher than international prices in about one-third of the cases.

1/ With the exception of capital (10%) and pharmaceutical goods (12.5%).

2/ See Kingdom of Morocco: Preparing for the 21st Century. Strengthening the Private Sector in Morocco", World Bank, report no. 11894-MOR, page 27.

1.04. Tunisia's adjustment program started in 1986, later than Morocco's, after a severe balance of payments crisis due to a fall in international oil prices. Stemming from the 1970s, Tunisia had inherited a large budgetary deficit (about 5.2% of GDP during 1981-86), a deteriorating current account balance (that after a peak of 11% in 1984 averaged 8% of GDP in 1985-86), an inefficient public sector, and an economy overridden with price, import and investment controls. The 1986 stabilization and reform policies aimed at reestablishing domestic and external balances and liberalizing internal controls. These policies contributed to an acceleration of growth, with GDP increasing by 4.6% a year during 1987-92; a reduction in external imbalances, with the current account deficit averaging minus 3% of GDP during the same period; an improvement in debt indicators; and a steady decline in the inflation rate from 8% in 1985 to 5.4% in 1992.

1.05. The devaluation of the real effective exchange rate (-14% between 1986-87) spurred the competitiveness of exports, which in turn helped to improve the macroeconomic balances. While oil exports declined (from 52.5% of total merchandise exports in 1980 to 15.1% in 1992), exports of manufactures increased in volume terms at an annual rate of 10.6% during 1986-1992, and tourism increased by 14% during the same period.

1.06. Trade liberalization. In the mid-1980s, at the outset of the reform program, quantitative restrictions on imports covered about 80% of imports (and 100% of domestic production). Import duties ranged between 5% and 236% with an average tariff rate of 36%. The first phase of the reform of import controls included a narrowing of the customs duties range to 17%-43% in 1987. Imports of raw materials, semifinished products and capital goods were liberalized first. However, in 1991 quantitative restrictions still covered about 70% of domestic production. Following the Gulf war, and the continuation of adjustment policies, a program of import liberalization was announced, laid down and followed. To cushion domestic producers against foreign competition, the 1991 Finance law introduced transitory compensatory customs duties ranging from 10% to 30%; they were lowered in each of the subsequent three years. The operation was repeated in the finance laws of 1992-94. Minor rationalizations of the tariff structure were implemented during 1991-93, and a surcharge of 5% was levied during the period 1991-93. By the end of 1994, only about 20% of domestic production, which includes two-thirds of the textile sector, is expected to remain under quantitative restrictions. But tariff protection on some consumer goods is as high as 73%.

TABLE 1.1: MOROCCO & TUNISIA - STRUCTURAL COMPARISONS

	Morocco		Tunisia	
GDP per capita (1992 $)	1110		1839	
Average annual rate of growth (1980-92): (in constant 1980 US$)				
Real GDP	3.32		4.10	
Merchandise exports	4.23		4.24	
- Manufactured exports	10.68		9.04	
- Non traditional exports* (1985-92)	7.49		11.44	
Merchandise imports (f.o.b.)	5.44		3.79	
Inflation (CPI)	6.56		7.28	
	1980	**1992**	**1980**	**1992**
Share of merchandise export in GDP	12.8	14.0	27.4	25.5
Sectoral share in GDP				
Agriculture	18.4	14.9	14.1	15.6
Industry	30.9	32.7	31.1	27.1
- Manufacturing	16.8	18.6	11.8	15.1
of which				
Agro-industry	4.7	5.6	2.9	3.2
Textile, clothing and footwear	3.4	4.6	2.8	4.8
Services	50.6	52.4	41.3	45.0
- Tourism			3.9	3.6
Structure of merchandise exports				
Agriculture	19.6	18.6	3.5	4.8
Industry	79.9	80.9	96.3	94.9
- Fuels, minerals**	46.0	16.6	46.3	16.9
- Manufacturing	33.9	64.3	43.5	78.0
of which (in % of manuf. exports)				
Agro-industry	26.0	13.2	9.2	6.9
Textile,clothing and footwear	32.3	42.0	46.7	55.1
Trade exposure (X+M)/GDP	45.3	51.6	85.8	80.9

* Non traditional exports: For Morocco = Merchandise exports - minerals;
For Tunisia = Merchandise exports - fuels.

** The sector includes: fuels and derivatives (which for Tunisia represented 89% of the sector in 1992) and minerals, mostly crude fertilizers (phosphates). (In Morocco, crude fertilizers represented 81% of the sector in 1992).

Outward Orientation and Industrial Structure

1.07. The economic structure in both Morocco and Tunisia responded favorably to the outward-oriented policies implemented in the 1980s (see Table 1.1). Sustained export growth allowed both a fast increase in imports of capital and intermediate goods, essential for resuming income growth, and a significant improvement in the current account balance. Manufacturing increased its share in the GDP of both countries ; and within manufacturing, production shifted towards the most export-oriented sectors: agroindustry and textile and clothing. The structure of exports showed remarkable changes: the share in merchandise of primary exports, phosphates and derivatives in Morocco and of oil in Tunisia, declined from around 46% in 1980 to 16%-17% in 1992 in both countries. During the same period, the share of textile and clothing in manufacturing exports increased from 32% to 42% in Morocco and from 47% to 55% in Tunisia.

The Institutional Infrastructure for Export Promotion

1.08. **Export incentives.** To compensate for the anti-export bias generated by the import and price protection policies of the 1970s and early 1980s, the authorities of Morocco and Tunisia have granted important fiscal and financial incentives to exporting firms. In Morocco, exporters, excluding those in services, benefit from tax holidays and exoneration from payment of indirect taxes. Direct and indirect exporters can import their inputs free of duty through a temporary admission mechanism. Except for a 1% levy on agricultural and agro-industrial goods, exports are not taxed. However, exporting certain subsidized agricultural commodities still requires a license. And the high protection of the agricultural sector, a "priority sector", makes exporting a less profitable activity.

1.09. In Tunisia, incentives to export activities have been significantly more important than in Morocco. Already in the early 1970s, the government introduced a law (no. 1972-56) that created an off-shore regime for foreign and domestic enterprises exporting more than 80% of their output. These firms were granted full exemption from income and indirect taxes and unrestricted duty free access to imported inputs. The benefits granted to exporters were then extended (law no. 1981-56) to partial exporters, as a pro-rata of their export sales. These benefits were included in all the sectoral Investment Codes. The system of temporary admission was further streamlined and simplified in the late 1980s. The revision of the sectoral investment codes and their substitution, in 1993 with an Unified Investment Code, has only marginally touched the structure of fiscal incentives for exporters (see Box I.1).[3]

1.10. **Financial incentives.** Export credit at preferential rates is available in both countries but its importance has declined in recent years. In Morocco, the ratio of export credits

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3/ It has substituted the permanent exemption from payment of income tax with a 10 year tax holiday followed by a permanent 50% reduction in the income tax rate.

to total credit to the economy declined from 21% in 1990 to 10% in 1992 (about 90% of this export credit is given at preferential terms). This fall was due not only to the slower growth in exports, but also to the increased banks' preference for more profitable lending. Banks can now lend to exporters at 12% (and obtain the Central Bank's refinancing at 10%) while average lending rates are 14%-15%. Similar arrangements for preferential export financing exist in Tunisia. The ratio of such credit to total credit to the economy has declined from 8.7% in 1990 to 5.3% in 1992. Preferential rates now stand at 10.25%. These credits can be rediscounted at the Central Bank at 8.25%. Average lending rates, just recently lowered, stand at 11.3%. The new Investment Code has eliminated all subsidized investment credits, including those for exports (which represented about one-third of total subsidized export credit).

1.11. **Foreign exchange regulations.** Foreign exchange controls have been progressively relaxed in both countries. Foreign investors have the right to fully repatriate dividends, profits and invested capital and are not subject to controls on expatriate hiring and salaries. Off-shore banks have operated for years in Tunisia; in 1992 they were also established in Morocco. Current account convertibility was achieved in 1993 by both countries. Foreign investors also enjoy the full convertibility of all capital operations related to their investments in the two countries. Exporters are allowed to keep 40% of their earnings in foreign exchange in Tunisia and 10% in Morocco (5% if they export services) for their needs. They can also keep accounts in convertible dinars and dirhams in the two countries respectively.

1.12. **Export promotion services.** Morocco and Tunisia have developed a complex framework for export promotion. It includes export promotion agencies (the most important being the CMPE in Morocco and CEPEX in Tunisia) insurance companies (the SMAEX in Morocco and the COTUNACE in Tunisia) insuring against political and catastrophic risk, chambers of commerce, and commercial representation overseas. Some of the existing agencies, which are mostly State owned or funded, have been fairly successful in participating in external fairs, providing information on foreign markets and in assisting established exporters. The services are provided at low or no cost to beneficiaries. Competition with private providers of services for exports is practically absent.

B. AN OUTLINE OF THE REPORT

1.13. The report is organized as follows. Chapter II analyses the performance of Moroccan and Tunisian exports during the 1980s. It shows that after a decade of sustained increase, export growth, particularly that associated with the European Union, slowed down considerably during 1990-92. Much of this slowdown was due to the economic stagnation in the main destination markets; however, supply factors also contributed.

1.14. Supply side constraints to export development are discussed in Chapter III. The chapter investigates how the structure of the economy, particularly the manufacturing sector,

changed in response to the trade liberalization policies and export promotion measures implemented by the Governments of Morocco and Tunisia during the 1980s. It then suggests a strategy for developing the export capabilities of firms and for increasing the flexibility of the industrial structure to changes in demand.

1.15. Chapter IV compares the export performance of Morocco and Tunisia with that of some Mediterranean, East European and Asian countries that compete in the market of the European Union (EU). While Morocco and Tunisia barely maintained their market share in the EU market, some of these countries, notably Asia, significantly increased it. The chapter shows that this was because they managed to improve both their short-term cost competitiveness and their structural comparative advantages.

1.16. Export growth in Morocco and Tunisia has been helped by the preferential treatment granted to their industrial products by the EU. The intensification of trade and the economic and political links between Europe and the Maghreb countries will largely depend, on the nature of the new Associations Agreements to be negotiated soon. Thus, Chapter V looks at the relevant aspects of these potential agreements, and it discusses what Morocco and Tunisia can learn from the recent experience of Eastern European countries in negotiating similar arrangements.

BOX I.1

THE MAIN CHARACTERISTICS OF THE TRADE SYSTEM AND EXPORT INCENTIVES 1993 - 1994

MOROCCO

TRADE PROTECTION

	Range (in %)
Custom Duties	0-35[1]
Special Import Levy (PFI)	15.0[2]
Reference Prices (as % of 1992 domestic production)	10
Export Levy	1
% of Domestic Manufacturing	
Output covered by QRs - 1986	40
- 1989	20
- 1993	less than 5[3]

FINANCE AND EXPORT PROMOTION

- Current account convertibility
- Foreign investors can repatriate 100% of capital and dividends.
- Exporters allowed to keep 10% of their earnings in foreign exchange (5% if they export services) for needs related to their field.
- Availability of export credit at preferential rate.
- Export Credit Insurance: the *Société d'Assurance à l'Exportation (SMAEX)*, a public establishment.
- Export Promotion: the main agency is the *Centre Marocain de Promotion des Exportations (CMPE)*, a public establishment.

THE MAIN EXPORT INCENTIVES

Exporting enterprises[4] (excluding services and indirect exporters). Incentives apply in proportion of production exported.

- 5 years tax holiday, 50% rate reduction afterwards.
- duty free imports (applies to direct and indirect exporters).
- reimbursement of PFI.
- exoneration from payment of VAT (up to a maximum).

TUNISIA

TRADE PROTECTION

	Range (in %)
Custom Duties	10-43
Compensatory Duty on Imports[5]	10-30
Export Levy	1.5
% of Domestic Production	
covered by QRs - 1987	97
- 1990	72
- 1993	41
- 1994	around 20

FINANCE AND EXPORT PROMOTION

- Current account convertibility.
- Foreign investors can repatriate 100% of capital and dividends.
- Exporters allowed to keep 40% of their earnings in foreign exchange to cover all expenses in foreign exchange related to their activity.
- Availability of export credit at preferential rate.
- Export Credit Insurance: the *Compagnie Tunisienne pour l'Assurance du Commerce Extérieur (COTUMACE)*, publicly owned.
- Export Promotion: main agency is the *Centre Extérieur pour la Promotion des Exportations (CEPEX)*, a public establishment.

THE MAIN EXPORT INCENTIVES

Totally exporting enterprises (all sectors)[6]

- 10 years income tax holiday, 50% rate reduction afterwards.
- exoneration from registration duties, custom duties and VAT.
- refund of custom duties and VAT on equipment goods imported and/or acquired on the local market.
- tax deductibility of reinvested earnings.
- possibility of selling up to 20% of production in the local market after payment of all taxes and duties.

Partially exporting enterprises and indirect exporters (advantages relate to the income generated from exports).

- 10 years income tax holiday, 50% rate reduction afterwards.
- suspension of VAT and consumption duties on capital goods needed for exports.
- refund of custom duties and charges on (a) raw materials and semi-finished products imported or acquired on the local market; (b) imported equipment goods not produced locally.

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[1] Higher rates on meat, milk, cereals, oilseeds and sugar.

[2] Except on capital (10%) and pharmaceutical goods (12.5%).

[3] Includes dangerous articles and, for 1994 only, cereals, oilseeds and sugar.

[4] See Code des Exportations, 13 August 1973. These incentives are maintained in the "*Projet de Loi portant Code aux investissements privés*", currently under discussion. Additional incentives are granted to exporters under particular conditions.

[5] Introduced in the finance law of 1991-94 on limited range of products and progressively lowered in subsequent years.

[6] See Law no. 93-120, December 1993, "*Code d'Incitation aux Investissements*". Note that additional incentives are granted if investments are made by new promoters, in disadvantaged areas and under several other conditions.

CHAPTER II: EXPORT GROWTH AND SLOWDOWN

2.01. During the 1980s, sustained export growth represented, in both Morocco and Tunisia, the essential component of a policy program designed to combine adjustment with rising incomes. Since 1990, however, real export growth has registered a significant slowdown in both countries. This slowdown in export growth may induce both countries to resort, to a larger extent than in the past, to import and demand compression, thus jeopardizing the objective of resuming fast and sustained output growth. Section A analyzes recent trends in the evolution of exports, while Section B reconstructs the contribution of prices and exchange rates to such an evolution. The performance of exports to the European Union, the main destination market, and the evolution of market shares in the EU are discussed in Sections C and D. Section E examines the contribution of both demand and supply factors to the export performance in the 1980s. Conclusions are drawn in Section F.

A. THE PERFORMANCE OF EXPORTS

2.02. *1980-1990 A decade of growth*. Table 2.1 shows the performance of total merchandise and manufactured exports during the 1980s and in the early 1990s for Morocco and Tunisia. Relative to the 1970s, when oil in Tunisia and phosphates in Morocco were the main export items, manufactured exports represented the fastest growing item in the 1980s: they increased by 13.7% and 6.8% a year in volume terms between 1983 and 1987 and by 15.1% and 14.4% between 1987 and 1990 in Morocco and Tunisia respectively.

2.03. *The 1991-1992 slowdown*. During 1990-92, the average volume of total merchandise exports fell by 2.6% in Morocco and grew only by 4.5% a year in Tunisia (relative to 8% and 9.1% during 1987-90 in the two countries respectively). The slowdown in manufactured exports was even more pronounced: they decreased by 3.4% a year in volume terms in Morocco and grew by 3.7% in Tunisia. Among Moroccan manufactured exports, fertilizers were particularly affected, and to a lesser extent clothing and electrical machinery, the latter being a newly exported product. Tunisia's better performance, however, should not be over-emphasized. First, it was due to exceptional levels of olive oil exports in 1991.[1] In fact, the decline in the export growth of most manufactured goods was as severe in Tunisia as it was in Morocco. Exports of agricultural products, as well as those of food-processing and chemicals fell substantially and exports of textile and clothing grew slightly less than in previous years. Second, contrary to Tunisia, reported trade statistics in Morocco only include direct exports. They exclude therefore all inward processing trade where Moroccan producers act as subcontractors transforming imported fabrics into finished products whose value added is recorded among services instead. As shown in Chapter III, gross subcontracting exports

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1/ Olive oil is classified as a manufactured good. In volume terms exports of olive oil increased from 49.7 to 158.2 thousands of tons. They were down to 96.5 thousands of tons in 1992.

(estimated from value added data) reached 26% of merchandise exports in 1992, up from only 11% in 1988. The inclusion of subcontracting would have made merchandise exports in Morocco grow at 0.9% a year during 1990-92 instead of the recorded 2.6% decline. Preliminary data for 1993 show, in both countries, a moderate resumption in the growth of both merchandise and manufactured exports, most likely due to an increase in the demand for the goods exported by the two countries, and, in the case of Tunisia, to a slight devaluation of the real effective exchange rates (see Table 2.2).

Table 2.1: GLOBAL EXPORT PERFORMANCE
(Average annual growth rates, in volume)

	1980-83	1983-87	1987-90	1990-92	1993 (est.)
Morocco					
Merchandise exports	4.8	4.6	8.0	-2.6	2.5
Manufactured exports	12.3	13.7	15.1	-3.4	3.7
Tunisia					
Merchandise exports	-0.7	4.3	9.1	4.5	1.6
Manufactured exports	10.5	6.8	14.4	3.7	5.0

Source: MN1CO database.

2.04. Performance of exports on the main partners' markets. Moroccan and Tunisian exports are directed towards a few markets, mostly in Europe, particularly in France. Geographical and historical reasons explain the closeness with Europe which is also the source of most foreign direct investments, workers' remittances and tourism receipts. However, the concentration of both products and markets makes exports of both countries more vulnerable to shocks and price fluctuations. Thus in 1990-1992, the European market, representing about 65% of Moroccan and 78% of Tunisian exports contributed to more than 90% of the fall in the rate of growth of exports for both countries (see Table 11 in Annex I).

2.05. The slowdown was not reflected only in the EU market (see Table 11 in Annex I). Arab countries, because of the Gulf war, and East European countries, in deep recession, imported at a slower rate. By contrast, Moroccan products performed well on "Other Industrial Countries" markets (namely USA, Japan, Canada, Australia, New Zealand and South Africa). In value terms, total exports to this region increased by 34% in 1991 mainly thanks to agricultural and food processing products (for example, exports of fresh and prepared fish to Japan). Globally, Tunisia's exports performed worse than in previous years in all other markets (excluding olive oil).

B. THE ROLE OF PRICES AND EXCHANGE RATES

2.06. Both movements in the exchange rate and in relative prices account for the changes in the value of exports. Table 2.2 shows that the positive export performance observed during the 1980s in both Tunisia and Morocco was positively correlated to the continued depreciation of the real effective exchange rate. The table also shows the evolution of the export prices in local currency (dirhams and dinars), the local currency vis-à-vis the dollar,[2] and their effect on the dollar value of exports.

Table 2.2: MOROCCO AND TUNISIA - PRICES AND EXCHANGE RATES
(all partners - average annual changes in %)

MOROCCO	1981-83	1984-87	1988-90	1990-92	1993 (est.)
Export Price in DH	10.7	7.0	5.8	1.6	3.8
Nominal Exchange Rate US$/DH	-17.9	-4.0	0.5	-1.8	-8.9
Combined Effect on $-valued exports	-9.1	2.7	6.3	-0.2	-4.7
Real Effective Exchange Rate	-5.4	-5.0	-2.2	0.5	1.0
TUNISIA					
Export Price in DH	7.2	3.3	8.9	2.8	10.7
Nominal Exchange Rate US$/DH	-15.8	-4.9	-1.9	-0.4	-13.5
Combined Effect on $-valued exports	-9.8	-1.8	6.8	2.5	-2.5
Real Effective Exchange Rate	-1.2	-7.5	-1.3	1.0	-1.5

Source: International Finance Statistics for Exchange Rate. MN1CO database for Export Prices.

2.07. In the early 1980s, export prices, expressed in local currency, increased by 10.7% per year in Morocco and 7.2% in Tunisia. This evolution was consistent with the high inflation rates experienced in most OECD countries. As price increases in these countries slowed down in the early 1990s, export prices in Morocco and Tunisia increased at a much slower pace, 1.6% in the former and 2.8% in the latter. To keep the competitiveness of their products, Moroccan and Tunisian exporters could not benefit any longer from a further depreciation of their currencies;[3] being price-takers, they had to lower the rate of increase in the price of their

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2/ The combined effect of price and exchange rates on the percentage change in the value of export flows in dollars is given by the following formula :
PX$ = PX + E/DH(DN) where
PX$ is the export price index in dollars
PX is the export price in local currency (DH or DN)
E/DH(DN) is the nominal exchange rate index of the US$ vs the dirham, DH (dinar, DN)
All variables are expressed in logs.

3/ In the next sections, the competitiveness of Morocco's and Tunisia's exports, measured by changes in the real exchange rate with respect to both industrialized and competitor countries, will be analyzed.

products, in order to remain competitive. Thus, part of the slowdown (approximately one-third) in the dollar value of exports registered in the early 1990s must be imputed to the slowdown in export prices.

C. THE PERFORMANCE OF EXPORTS TO THE EUROPEAN UNION

2.08. Much of the export slowdown of Morocco and Tunisia in 1990-92 can be attributed to the stagnant demand in the European market. Table 2.3 shows that the average annual rate of growth of nominal dollar exports from Morocco to the EU fell from 24.3% in 1987-90 to 3.7% in 1990-92. In turn, fertilizers, clothing and agro-industrial products accounted for most (15.25%) of the total slowdown (20.53%) of manufacturing exports[4] (see Table 10 in Annex I). The picture for Tunisia is fairly similar. The growth rate of merchandise exports to the EU decreased from 15.9% in 1987-90 to 6.19% in 1991-92. Much of the fall can be predicated on the worsening performance of fertilizers, agro-industry, mineral fuels and clothing.

Table 2.3: PERFORMANCE OF MERCHANDISE EXPORTS TO THE EU
(nominal US$ - average annual growth rates)

	1980-83	1983-87	1987-90	1990-92
Morocco	-6.9	12.4	24.3	3.7
Tunisia	-13.6	11.0	15.9	6.2

Source: COMTRADE, World Bank.

D. THE EVOLUTION OF MARKET SHARES

2.09. In spite of the recent slowdown, during 1990-92 Morocco and Tunisia registered slightly growing shares in the EU market for their manufacturing exports. The share of Morocco's products in total manufacturing imports of the EU increased from 0.17 of one percent in 1980 to 0.316 in 1990 and 0.318 in 1992. The share of Tunisia's manufacturing exports in the imports of the EU declined from 0.270 of one percent in 1980 to 0.226 in 1987 and then rose to 0.260 in 1990 and 0.309 in 1992.

4/ Their contribution to merchandise export growth, measured by their own growth rate multiplied by their share in merchandise exports in the initial year, fell from 4.1 to -1.24% for fertilizers, from 11.00 to 4.14% for clothing and from 2.08% to -.97% for processed food between 1987-90 and 1990-92.

2.10. The evolution of market shares is determined on one hand by competitiveness and on the other by the geographical and the sectoral composition of exports. If the initial composition of exports is biased towards fast growing markets and/or commodities, aggregate export growth may be sustained even in the absence of any positive competitiveness gain. Conversely, an unfavorable sectoral and/or geographical composition of exports may negatively impinge on the overall export performance. A technique, the constant-market share analysis, will be used in the next section to evaluate the contribution of each of these effects to the behavior of exports.

2.11. **Constant market share analysis.** In the "constant-market share analysis", the difference between the growth rate of a country's exports and that of the destination country's imports, in this case the EU, is decomposed into two factors. The first term measures by how much the country's export growth would have exceeded total import growth in the EU, had such exports to each of the EU's member countries[5] grown at the imports growth rate in each of these members; that is, had the country held to its import share in each member country of the EU. This is labelled the country's effect. If positive, it indicates that the composition of the country's exports was biased towards the relatively fast growing national markets in the EU. The second term, the differential effect, is measured as the weighted difference between the growth rate of the country's exports to the member countries of the EU and the growth of imports in these countries. It is a broad measure of competitiveness: a positive differential effect indicates that on average the country's exports have increased their market shares[6] (see part A in Table 2.4).

2.12. Table 2.4 shows that between 1980 and 1990, Morocco achieved remarkable success in gaining market shares for its manufacturing products in the EU market. The differential effect, constantly positive throughout the decade, reached a peak during 1987-1990. However, during 1990-1992, Morocco's performance slowed down considerably. The export growth was further hampered by a negative country composition effect. The small weight of Germany, a fast growing market, and the large weight of France, a country particularly affected by the recession, contributed to the weak performance of manufacturing exports. Overall, therefore, Morocco held its market share in the EU's countries between 1990 and 1992, but was somewhat penalized by an unfavorable country effect.

5/ The EU countries taken into account are France, Belgium, Italy, Germany, Netherlands, the United Kingdom, and Spain.

6/ Formally, let X, X_i, M and M_i indicate Morocco's total exports, Morocco's exports to country i, the EU total imports and imports into country i. Let $a_i = X_i/X$ and $b_i = M_i/M$. We then have that $X' = \Sigma\, a_i X'_i$ and $M' = \Sigma\, b_i M'_i$, where a prime indicates a growth rate. It is easy to show that:
$X'-M' = \Sigma\, (a_i - b_i)\, M'_i + \Sigma\, b_i\, (X'_i - M'_i)$
where the first term refers to the country effect and the second term to the differential effect.

2.13. These findings are only marginally different if the effect of the sectoral composition of exports, rather than the country composition, is considered[7] (Part B of Table 2.4). In this version of the market share analysis, the growth of a country's exports of products in the most important sectors is compared to the growth of each European country's imports in these sectors. In Morocco, the sector effect was constantly negative during the 1980s, indicating relatively slow growing sectors. However, it became positive after 1990, probably because some sectors, such as clothing and agro-industry, were less hard hit by the fall in aggregate demand in the EU. On the contrary, the differential effect (again, an indicator of broad competitiveness) was positive throughout the 1980s but turned negative after 1990.[8]

Table 2.4: CONSTANT MARKET SHARE ANALYSIS

	MOROCCO				TUNISIA			
	1980-83	1983-87	1987-90	1990-92	1980-83	1983-87	1987-90	1990-92
Manufactures export growth (current US$)	11.4	113.9	99.9	11.7	-19.1	74.5	75.8	32.1
Decomposition of export growth *								
1) EU demand	-13.6	94.6	53.0	11.1	-13.5	94.6	53.0	11.1
2) A - country effect	-0.6	1.1	0.3	-2.3	-2.8	1.5	0.2	0.2
- diff. effect	25.6	18.2	46.6	2.9	-2.8	-21.6	22.6	20.8
or: B - sector effect	-3.4	-11.1	-7.4	6.0	-2.8	-3.6	-7.8	6.9
- diff. effect	28.4	30.4	54.3	-5.4	-2.8	-16.5	30.6	14.1

* The export growth can be decomposed in the EU demand + (A) country effect + differential effect; or (B) + sector effect + differential effect.

Source: COMTRADE data, World Bank, Staff estimates.

2.14. The application of the constant market share to Tunisian exports yields different results. First, the improvement in Tunisia's export performance came later than that in Morocco.

7/ The formula for the decomposition into sectoral and differential effects is the same as in the previous footnote, with the index i referring to sectors rather than to countries.

8/ Obviously, the differential effect after controlling for sectoral effects also includes the impact of country composition. Similarly, the decomposition in the first part of Table 2.4 does not control for sectoral effects. It is possible to define a new decomposition which controls simultaneously for both country and sectoral effects. The results however do not change in any substantial way.

The differential effect for Tunisia, measured after controlling either for country or for sector effects, was negative until 1987. It was only after 1987 that Tunisia registered a positive differential effect, probably due to a better competitiveness. Second, contrary to Morocco, the country effect remained positive also after 1990. This finding reflects the substantially larger weight of the German market for Tunisia's exports. Third, Tunisia registered a substantially positive differential effect even after 1990.

E. THE DETERMINANTS OF MANUFACTURING EXPORT GROWTH

2.15. The results of the constant market share analysis suggest that not only the economic conditions in Europe but also competitiveness effects affected a substantial role in the demand for Moroccan and Tunisian exports in the EU. The changes in competitiveness during the 1980s should in turn be explained by the analysis of the supply of exports. To this aim, the next section provides an econometric analysis of the export supply and the export demand for both Morocco and Tunisia.[9]

Export demand

2.16. **Determinants of export demand.** The evolution of the main determinants, on the demand side, of Morocco's and Tunisia's manufacturing exports is presented in Table 1.5. The variables taken into account are the international demand, measured as a weighted average of real imports[10] of the main trade partners, and the evolution of the real exchange rate with respect to industrial countries and to competitor countries.[11] An increase in the real exchange rate index indicates a real appreciation.

9/ The theoretical specification of the export demand and supply are discussed in Annex II.

10/ These are merchandise imports and not manufactures. Appropriate deflators of manufactured imports were not available.

11/ The developed countries are: France, Italy, Germany, Netherlands, the United Kingdom, Belgium, Spain. Competitor countries are: Tunisia (Morocco), Turkey, Greece.

Table 2.5: EVOLUTION OF DETERMINANTS OF MANUFACTURING EXPORT GROWTH

	MOROCCO				TUNISIA			
			Real Exchange Rate* with respect to				Real Exchange Rate* with respect to	
	Real Exports	World Demand	Competit. Countries	Indus. Countries	Real Exports	World Demand	Competit. Countries	Indus. Countries
1980	85.8	102.4	109.38	109.65	58.2	103.2	92.49	96.43
1981	97.0	91.2	103.86	112.57	67.8	93.1	91.54	102.30
1982	97.9	91.7	107.59	116.11	79.9	95.0	96.78	105.63
1983	104.5	90.8	105.99	111.05	79.4	91.4	97.94	101.64
1984	103.5	93.7	103.86	104.84	88.9	93.5	98.57	99.97
1985	100.0	100.0	100.00	100.00	100.0	100.0	100.00	100.00
1986	130.9	110.8	109.87	92.08	109.1	112.0	99.49	85.16
1987	164.2	117.4	115.27	85.88	136.9	121.4	89.95	70.93
1988	198.9	121.2	118.99	87.39	148.5	126.7	88.96	70.37
1989	245.7	121.8	115.95	89.72	168.9	129.5	82.75	70.12
1990	263.9	130.9	104.52	80.25	199.5	137.9	81.88	67.48
1991	267.6	140.1	104.87	81.21	227.7	145.5	84.37	69.64
1992		144.9	104.87	81.30		146.6	90.20	72.92

* An increase in the index indicates a real appreciation.
Source: Staff estimates

2.17. The behavior of international demand closely follows the evolution of the European economy and is similar for both Morocco and Tunisia. International demand fell from 1980 to 1983, reflecting the delayed recovery in Europe relative to the U.S. It then increased steadily until the end of the sample period. The evolution of the real exchange rate presents different characteristics in the two countries.

2.18. In Morocco, the real exchange rate with respect to industrial countries depreciated from the beginning to the end of the 1980s, registering instead a modest appreciation during 1991-1992. However, when measured with respect to competitor countries, it showed a slightly more erratic behavior. It depreciated until 1985, then appreciated significantly until 1989 (mostly as a result of the more aggressive exchange rate policy pursued by Tunisia and Turkey) and finally, after the devaluation of the dirham in 1989, remained stable at a lower level. Over the sample period, the behavior of the real exchange rate mirrors the results of the constant market share analysis quite well. Indeed, the findings of a positive differential effect generally coincide with a depreciation in the real exchange rate (during the period 1983-86 and especially in 1987-90).

2.19. In Tunisia, the real exchange rate measured with respect to both industrial and competitor countries appreciated in the early 1980s and depreciated afterwards. Starting in 1991, as the inflation rate was relatively higher in Tunisia than in the competitors' countries the

exchange rate appreciated. This undesired evolution was corrected through a depreciation of the dinar in 1993. As for Morocco, the behavior of the real exchange rate in Tunisia mirrors the findings of the constant market share analysis. Between 1983 and 1987, the appreciation of the real exchange rate was reflected in a negative differential effect. The devaluation in 1986 came probably too late for its effects to be felt during the whole period. Similarly, the more aggressive exchange rate policy after 1986 was associated to a positive differential effect during 1988-1990. Perhaps surprisingly, however, the real exchange rate appreciation in 1991-92 did not coincide with a negative differential effect. There are two possible reasons for this result: first, the export performance in 1991-92 still benefitted from the lagged effects of the devaluation in the previous period; second, our estimates suggest that in the very short-run the demand for Tunisia's export is price-inelastic. As a result, a real appreciation will induce, in the short-run, an increase rather than a decline in the market share of exports, measured in current prices. The improvement in the market share, however, ought not to be taken as an indication that a real appreciation is of no concern. In the medium run, a real appreciation will have a severe negative impact in the export performance.

2.20. **Export demand.** The econometric estimation of an export demand equation (see Table A2 in Annex II) suggests that both international demand and the real exchange rate are significant determinants of the export performance of Morocco and Tunisia. In both countries, an increase in international demand leads, in the long run, to an equiproportionate increase in manufacturing exports. Export demand was also found to be highly responsive to price incentives.[12] The long-run impact of a real exchange depreciation was estimated to be equal to 2.73% and 8.8% in Morocco and Tunisia, respectively. This finding highlights the importance of appropriate exchange rate policies for the performance of exports.[13]

Export supply

2.21. In aggregate, both the volume of exports and the value of the real exchange rate are determined through the interaction of demand and supply factors. The evolution of domestic

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12/ In the export demand equation, what matters is the ratio of Morocco and Tunisia export prices to foreign prices, measured by the real effective exchange rate. In the supply equation, what matters is relative export profitability, which is typically measured by the ratio of export to domestic prices. There are therefore two price elasticities of export, one in the demand equation relating the change in the external real exchange rate, the other in the supply equation relating the change in export supply to the ratio of export to domestic prices (or costs).

13/ In Table A2 of Annex II only steady state factors are considered. In Morocco international demand played a crucial role in the export boom from 1984 to 1987 and a positive albeit smaller role in 1987-90. The evolution of the real exchange rate was instrumental in promoting fast export growth, especially after 1987. In Tunisia, both competitiveness and international demand provided a negative contribution to export growth during 1980-1983. Both factors shifted to a positive contribution in the following years. Finally, in 1987-90, the multiplier role of international demand declined. Conversely, competitiveness effects appear to have been paramount in promoting export growth in 1987-90.

costs, the incentive to sell on domestic markets, measured by the ratio of export to domestic prices, as well as the growth of productive capacity would affect the ability of domestic producers to compete with foreign firms. These factors would also influence the impact of a nominal devaluation.[14] In fact, if offset by higher domestic costs, a nominal devaluation would prove to be an ineffective way to promote exports.

2.22. Estimates of an export supply equation for Morocco and Tunisia are reported in Table A1 of Annex II. The results indicate that in Morocco, a one percent increase in the ratio of export to domestic prices[15] is associated with a 1.01% increase in the supply of exports. The elasticity of export supply to productive capacity (measured by industrial value added) is estimated to be 3.39%. Finally, a unitary increase in the capacity utilization rate would lead to a 2.08% fall in export supply. Estimates for Tunisia indicate a more significant response of the export supply to the domestic terms of trade. A one percent increase in the real price of exports would lead to a 2.71% expansion in exports. The elasticity of export supply to productive capacity is 1.99%. Finally, an increase in capacity utilization would lead to a reduction in export supply equal to 2.48%. The high elasticity of export supply to productive capacity in both countries indicates that exports have increased at a much faster rate than value added in industry. This may be explained by (i) the increased openness of the two economies and (ii) the increasing weight in total sales of intermediate inputs. The latter implies that exports (which are measured on a gross basis) will increase more rapidly than value added.[16]

2.23. These results highlight the crucial role that policy variables may play in promoting the supply of exports. First, by inducing an increase in the relative price of non-tradeable goods, an expansionary macroeconomic policy would cause a leftward shift of the export supply curve, with a negative and immediate impact on exports. Second, an increase in domestic demand would lead to higher domestic prices and therefore to lower exports. Moreover, the econometric estimates show that even at unchanged prices a sudden increase in demand would crowd out export supply. This would probably happen through: the switching of some firms from being exporters to domestic sellers; an increase in the share of output sold on the domestic market by partially exporting firms (see Chapter III); the lengthening of delivery lags; the rationing of foreign consumers; and the increase in the cost and the availability of crucial non-traded inputs (such as energy and labor) which would affect export supply. The relevance of

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14/ This report does not investigate how domestic prices would respond to a nominal devaluation. To do this, a full macroeconomic model would be needed, detailing the stance of both fiscal and monetary policies.

15/ The relative profitability of exports is measured by the ratio of export prices to the consumer price index. The CPI is taken as an indicator of the evolution of non-traded goods prices.

16/ One way to account for both these effects is to introduce a time trend in the equation. If this is done, it becomes possible to impose the restriction of a unitary elasticity of exports with respect to capacity for Tunisia. Even in this new specification, all the other coefficients are basically left unchanged.

these effects for Morocco (and Turkey) has already been documented.[17] They appear to play a role also in Tunisia, implying a reduction in the well-known market segmentation between producers for domestic and foreign markets.

A decomposition of demand and supply effects

2.24. A full decomposition of the contribution to export growth of both demand and supply factors is reported in Table 2.6. The evolution of exports is seen to depend on international demand, productive capacity, the rate of capacity utilization and the ratio of foreign to domestic prices.[18] For Morocco, international demand played an important role in the evolution of exports. Moreover, the simulations indicate that a large share of export growth can be explained by the increase in productive capacity. The capacity utilization rate, on the other hand, seems insignificant when measured over a full business cycle. Finally, in both the 1984-87 and the 1987-91 periods, the increase in the relative price of industrialized and developing competitor countries played a large role in the evolution of exports.

Table 2.6: CONTRIBUTION TO EXPORT GROWTH - DEMAND AND SUPPLY FACTORS (in % of export growth)

	MOROCCO		TUNISIA	
	1983-87	1988-91	1983-87	1988-91
EU Demand	20.7	8.7	3.4	3.7
Real Exchange Rate of				
* Competing countries	3.0	7.4	-29.7	11.6
* Industrialized countries	18.1	12.5	5.3	3.3
Productive Capacity	58.6	70.2	116.9	77.3
Capacity Utilization	-.4	1.2	4.1	4.1

Source: Staff estimates

17/ See R. Faini (1994), "Export Supply, Capacity and Relative Prices", Journal of Development Economics, forthcoming.

18/ Export prices are determined endogenously. In a reduced form context, the correct measure of the relevant price incentives is provided by the ratio of competitors' prices to non-traded goods prices.

2.25. For Tunisia, the decomposition of export growth highlights the role of productive capacity and of factor prices in explaining export growth.[19] Between 1982 and 1985, the upward trend in the relative price of domestic goods provided a negative and substantial contribution to export growth. The devaluation of the exchange rate policy in the mid 1980s was reflected in the positive role that price incentives played in promoting export expansion from 1988 to 1991. More than 38% of export growth during this period can be attributed to the declining profitability of sales in the domestic markets.

F. CONCLUSIONS

2.26. The empirical work presented in this Chapter has shown that the recent slowdown in the export growth of Morocco and Tunisia can be largely attributed to worsening economic conditions in the main destination markets, notably those of the EU, mitigated however by a relatively high demand for the consumption goods (such as clothing and processed food), exported by the two countries.

2.27. Competitiveness effects did play a role, but not a large one. In Morocco, the real appreciation of the dirham after 1990 was too small to account for much of the export slowdown. However, in Tunisia, the real appreciation of the dinar in 1991-92, more pronounced than that in Morocco, may have accounted for some of the export slowdown. The 1993 depreciation of the dinar should have partly addressed this imbalance, provided that it is not going to be offset by higher domestic costs.

2.28. As export demand in both Morocco and Tunisia is very dependent on price competitiveness with respect to the other country (as well as being a function of prices in other competitor countries) the authorities in the two countries may be tempted into a series of devaluations. However, they should be aware that such a "war" may deteriorate the terms of trade without achieving substantial gains in price competitiveness.

2.29. The responsiveness of export flows to price incentives during the 1980s in both Morocco and Tunisia highlights the crucial role of exchange rate policies in promoting export growth. It is therefore essential that the evolution of the real exchange rate, in particular with respect to competing countries, be constantly monitored and an excessive real appreciation avoided through appropriate macroeconomic policy adjustment.

19/ In these regressions, contrary to the market share analysis, international demand does not play a significant role in explaining the behavior of exports, as it does for Morocco. There is not, of course, a well-defined statistical relationship between market share and regression analysis. Moreover, the coefficients of the EU demand in Table 2.6 are calculated on the basis of a reduced form, which in turn is a function of all demand and supply coefficients; the latter differ considerably for the two countries.

CHAPTER III: SUPPLY-SIDE CONSTRAINTS AND DEVELOPMENT OF EXPORT CAPABILITIES

A. INTRODUCTION

3.01. Chapter II has shown the vulnerability of export growth in Morocco and Tunisia to changes in international demand. When export demand falls, or is simply shifted in favor of new products, the issue of international competitiveness becomes vital. Competitiveness is not just based on prices but equally on the capacity to adapt rapidly to user needs. The adaptability of supply to day-to-day changes in demand is a central characteristic of the new competitive environment in which Morocco and Tunisia operate. Thus, this chapter will discuss some of the factors which may help to develop the export capabilities of firms in the two countries.[1]

3.02. Section B analyzes the structural characteristics of exporting and non exporting firms, and discusses how the liberalization policies adopted by the governments of both countries since the mid-eighties affected the structure of the manufacturing sector. Using enterprise data, Section C examines factors underlying the decision to change status from being a domestic seller to an exporter; it then looks at the main characteristics of the exporting firms, using regression analysis. The main objective of these two sections is to deepen the understanding of the microeconomic effects of trade liberalization policies in Morocco and Tunisia. The most successful exporting sector, textile, clothing and footwear, is analyzed in Section D. A review of the main elements of export promotion services and existing technological capabilities is given in Section E. Finally, Section F summarizes the main results and provides recommendations on how to build and improve export capabilities.

B. STRUCTURE AND EXPORT ORIENTATION OF THE MANUFACTURING SECTOR

3.03. The manufacturing sector in both Morocco and Tunisia responded positively to the trade liberalization and export promotion policies adopted in the 1980s. Specifically, two important trends can be detected : first, during 1980-90 the share of exported manufacturing production increased from 13% to 25% in Morocco and from 25% to 35% in Tunisia; second, the share of natural resource-based exports (e.g., phosphates and fertilizers, and oil) declined, in both countries, in favor of the labor-intensive sectors, in particular the textile, clothing and

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1/ The focus of this chapter is on supply side constraints to export development. A comprehensive view of constraints to private sector development is in: (a) Kingdom of Morocco: Developing Private Industry in Morocco, Vol. I and II, Report no. 11557-MOR, July 1993; (b) Kingdom of Morocco: Preparing for the 21st Century - Strengthening the Private Sector in Morocco, Report no. 11894-MOR; (c) Republic of Tunisia: Private Sector Assessment, Report no. 12945-TUN, April 1994.

footwear sector (TCF).[2] There was, however, not much change in the structure of export industries. Thus, the reforms implemented during the 1980s managed to increase the share of production exported; but they also *intensified the export orientation of those industries that were already highly export-oriented*, in particular the TCF sector, and therefore did not lead to a significant diversification of the export base. In the case of Morocco, where disaggregated firm-level data are available, only one industry, electrical and related goods, increased its export orientation from below to above the average during the 1980s.[3]

A Dualistic Structure

3.04. The dualistic structure of the manufacturing sector in the two Maghreb countries largely reflects the combination of past import policies, aimed at protecting the local industries, and the generous fiscal and financial incentives granted to exporters, especially in Tunisia. Similar incentives, although less generous, existed in Morocco. The distribution of enterprises by export orientation, size and sector in the two countries is presented in Table 3.1.

2/ The Data. The empirical analysis of this chapter is mostly based on information from annual enterprise surveys. The source of the primary data for Morocco is the annual plant surveys of the manufacturing sector for 1985-89 conducted by the Ministry of Commerce, Industry and Privatization. These surveys cover all "formal" manufacturing plants with more than 10 workers or with total annual sales above DH 100,000, regardless of the number of workers. In 1989 the survey covered 5200 firms of which 4112 produced mainly for the domestic market and 1088 served both the domestic and the export market. In the case of Tunisia, the main source of data is the survey of enterprises in industry, trade and services collected annually (1985-90) *by the Institut National de la Statistique* (INS). It covers about half of the existing "formal" industrial enterprises (around 2000 firms in 1990) with more than 10 workers, and therefore is less comprehensive than the data for Morocco. The structure of the manufacturing sector during 1980-90 is presented in Tables 12 and 13 in Annex 1.

3/ Export orientation was measured by the share of exports in production. See Table 15 in Annex I.

Table 3.1: DUALISM IN THE MANUFACTURING SECTOR IN MOROCCO (1989) AND TUNISIA (1990)
(Percentage of all firms)

	Export-oriented firms (export share ≥ 10%)		Domestic-market oriented firms (export share < 10%)	
	Morocco	Tunisia	Morocco	Tunisia
Agro-Industries	12.7	12.2	87.3	87.1
less than 100 workers	6.1	11.8	81.0	77.6
100 workers and more	6.6	0.4	6.3	9.5
Textiles, clothing, footwear	50.7	49.2	49.3	50.8
less than 100 workers	29.6	25.2	44.5	41.1
100 workers and more	21.1	24.0	4.8	9.7
Chemicals	7.7	27.7	92.3	72.3
less than 100 workers	5.3	20.2	78.2	60.6
100 workers and more'	2.5	7.4	14.0	11.7
Metals and Machinery	5.8	32.9	94.2	67.1
less than 100 workers	3.0	21.8	82.6	52.9
100 workers and more	2.8	11.1	11.5	14.2
Other Manufacturing	19.4	18.4	80.6	86.1
less than 100 workers	12.9	15.7	71.0	70.3
100 workers and more	6.5	2.7	9.7	11.4

Source: Calculations based on data from the Ministry of Commerce, Industry and Privatization in Morocco and the survey of enterprises by INS in Tunisia.

3.05. Only about 15% of the firms in Morocco (in 1989) and 23% of firms in Tunisia (in 1990) employed more than 100 workers. However, they produced 76% of total manufacturing output and accounted for 87% of manufactured exports in Morocco; and 72% of output and 85% of exports in Tunisia. In both countries, the value added content of production was lower for exporters than for non exporters. In Tunisia, the exporting firms paid on average lower wages than those paid by non exporting firms, and the share of wages in value added was more than twice as large for the former than the latter. The Moroccan data suggest that both real wages and labor productivity were lower in the export oriented firms, relative to those domestic oriented.[4] During 1986-1990, unit labor costs in exporting firms remained flat (relative to a 1% average annual increase in the domestic oriented firms), as a combination of a

4/ See World Bank, 1994, Kingdom of Morocco: "Poverty, Adjustment & Growth", Report No. 11918-MOR, pages 38-39.

proportional decline in both labor productivity and real wages. But employment expanded substantially, by 24.5% in the export-oriented sectors and 2.8% in the domestic sector.

3.06. An important byproduct of the dualism in the manufacturing sector is the weak linkage between firms producing for the domestic market and those producing mainly for exports. This is especially evident in Tunisia. A recent survey[5] indicates that off-shore enterprises, which account for 40% of merchandise exports, obtain most of their inputs, except labor and energy, from abroad as local inputs are either not available or when they are available, their quality is not acceptable by the exporting firms.[6] The smaller size of the domestic-market oriented firms and the resulting low financial, technical, and marketing capabilities have prevented these firms from becoming indirect exporters. Weak linkages also exist in Morocco where imports under temporary admission (i.e., for exports) represented 25% of merchandise imports in 1991.

3.07. A third important feature of exporting firms in both countries is foreign participation (see Table 16 in Annex I). Foreign participation is predominant in large firms, with more than 100 workers, and in the exporting sectors.

Subcontracting

3.08. The importance of foreign participation in the export sector needs to be qualified. In both countries a significant proportion of exports, especially in the TCF sector, is made by firms that are either subsidiaries of foreign firms or domestic enterprises operating on subcontracting terms. In Morocco, subcontracting accounted for 26% of exports of merchandise products[7] in 1992; in Tunisia, its contribution to exports was even higher standing at 50% in 1991. The growth rate of subcontracting exports has been, in recent years, higher than that of other exports; and the share of subcontracting has been rising fast.

5/ See API (1991), *Etude sur les entreprises totalement exportatrices en Tunisie.*

6/ In the case of foreign-owned off-shore enterprises, 80% of raw materials were imported in 1991. See *Etude sur les Entreprises Totalement Exportatrices en Tunisie*, API, August 1991.

7/ In Morocco, subcontracting exports are reported in the trade statistics under the heading of services (as value added) rather than merchandise exports. The figures in Table 3.2 have been constructed by adding to the figures of value added from subcontracting activities (reported in services) the related expenditure on intermediate imports. Disaggregated data on subcontracting for Tunisia were provided by the INS. In Tunisia, subcontracting is included in the trade figures as merchandise exports. This must be borne in mind when comparing the export performance of the two countries.

Table 3.2: SUBCONTRACTING EXPORTS
(nominal values, millions of local currency)

	1988	1989	1990	1991	1992
Morocco					
Export growth of:					
(1) - Merchandise [1]	27.4	-5.1	23.4	7.3	-8.8
(2) - Subcontracting	43.3	36.7	35.5	18.6	24.2
Value of (2)/(1) percent [2]	10.9	15.6	17.2	19.0	25.9
Tunisia					
Export growth of:					
(1) - Merchandise [1]	5.1	36.1	4.7	9.2	n.a.
(2) - Subcontracting	18.9	28.3	30.0	13.8	n.a.
Value of (2)/(1) percent [2]	40.4	38.1	47.3	49.3	

1) Excluding subcontracting.
2) Percentage share of total subcontracting in total merchandise (excluding subcontracting)
Source: Tunisia, INS; Morocco, Ministry of Industry and Commerce.

3.09. The increase in subcontracting can be first explained by the international restructuring of the TCF sector, as industrialized countries abandoned the production of low quality garments while still maintaining the initiative with respect to more sophisticated and technologically advanced segments.[8] In Morocco and Tunisia, subcontracting dominates the clothing sector, particularly in low technology, low skill activities such as garment assembly. During the 1980s, it represented the privileged instrument by which the European TCF industries maintained a predominant position in their own market.

3.10. A second reason for the importance of subcontracting is the existing system of quotas, or voluntary exports restraints (VERS) on a few TCF products that the two Maghreb countries have agreed with Europe (see Chapter V). VERs concerns trousers, blouses, shirts and dresses for both Morocco and Tunisia (and a few additional products for Tunisia); they vary by country of destination and according to whether these products are produced from European or non European raw materials. TCF exports produced under subcontracting (or "Traffic de Perfectionnement Passif") using fabric imported from Europe are partly excluded from VERs or have higher quotas than exports of the same goods produced with indigenous inputs or inputs from other countries. This might explain the extraordinary development of subcontracting in recent years.

8/ See M. Royon, *"La transnationalisation de la production, le cas des textiles chimiques"*, Presses Universitaires de Lyon, 1982, as well as D. Jacomet, *"Le textile-habillement : une industrie de pointe"*, Economica, Paris, 1989.

Lack of Diversification

3.11. The EU has traditionally represented the main destination market for Moroccan and Tunisian exports. Indeed, the share of merchandise products that is exported to the EU increased from 62.7% in 1980 to 64% in 1992 in Morocco and from 72.1% to 78.0% in Tunisia during the same period (see Tables 7-9 in Annex I). In Europe, both countries are now exporting even more to the French market. In spite of a diversification from primary to manufactured goods, within the manufacturing sector, the TCF sector has also increased its already high export orientation. The lack of both market and sectoral diversification can be seen from the indicators reported in Table 3.3.

Table 3.3: INDICES OF SECTORAL AND GEOGRAPHICAL CONCENTRATION

	1980	1983	1987	1990	1992
Morocco					
Geographical Concentration	.358	.352	.418	.411	.399
Sectoral Concentration	.208	.175	.299	.327	.373
Tunisia					
Geographical Concentration	.244	.259	.285	.283	.265
Sectoral Concentration	.254	.308	.360	.396	.398

3.12. During 1980-1990, the Herfindhal index of geographical concentration for the exports to the EU increased in both countries; it decreased, but only marginally, during 1990-1992. The increase in the Herfindhal index of sectoral concentration was even more pronounced, from 0.21 in 1980 to 0.373 in 1992 in Morocco and from 0.25 to 0.39 in Tunisia. This pattern highlights the vulnerability of both countries to the vagaries of market and policy conditions in a few products and markets.

C. FACTORS AFFECTING THE DECISION TO BECOME EXPORTERS

3.13. Which factors have influenced the decision of some domestic firms in Morocco and Tunisia to become (and not just to be) exporters? Do the characteristics of the firms that became exporters differ significantly from those that remained domestic sellers? Answering these questions would deepen the understanding of the microeconomic effects of trade liberalization and help governments to better design export promotion policies. The analysis has been performed separately for Morocco and Tunisia on the basis of information from annual enterprises' surveys in both countries.

3.14. **Morocco.** Table 3.4 shows the characteristics of new entrant exporters and of firms that switched from being domestic sellers to exporters in Morocco. Export-oriented firms are defined as those firms with an export to sales ratio greater than 20 percent. The cut-off point is the same as that used for Tunisia. Different cut-off points would not affect the results much given the bimodal distribution of export shares across Moroccan firms. Newly exporting firms can be either wholly new firms (entrant exporters) or firms that have switched from domestic to export markets (EDS). The number of newly created exporting firms was 478 during 1985-1989 and 137 during 1989-1990. The large weight of export-oriented firms among entrants increased their aggregate share from 13.4 percent in 1985 to 17.8 percent in 1990. Entrant exporters were bigger than firms selling in the domestic market and their foreign ownership share was larger.

Table 3.4: MOROCCO - NEW ENTRANT EXPORTERS AND FIRMS SWITCHING FROM DOMESTIC TO EXPORT MARKETS
(domestic sellers at t-1, exporting at t (EDS))

	New Entrant exporters		EDS	
	1985-89	89-90	1985-89	89-90
Number of firms	478	137	119	108
In % of exporters (domestic sellers) at t-1		19.5		2.7
Export share (1) (in %)	88.9	88.5	62.3	54.8
Size (2)	104.5	67.7	109.7	100.8
Share of foreign ownership (in %)	19.5	18.2	10.9	14.3

Note: (1) Share of exports in percentage of total sales. End of period values for EDS firms
(2) Number of employees

Source: Kingdom of Morocco, Ministry of Commerce Industry and Privatization, Annual Surveys of enterprises.

3.15. Firms switching from domestic to export markets shared many characteristics with entrant exporters. First, their foreign ownership share was considerably larger than that for domestic sellers. Second, their size was greater; the average size of switchers was 100.8 employees in 1989-90 against a value of 49.8 for domestic sellers. A further characteristic of switching firms was that their export orientation (54.8 percent in 1990), on average smaller than that of either entrant exporters (88.5 percent) or steady exporters (82.2 percent). However, a troubling characteristics of firms switching to export markets is that they do not seem to do so for long. The number of switching firms between 1985 and 1990 was equal only to 135. Given

that firms switching from domestic to export markets numbered 119 between 1985 and 1989, and 108 between 1989 and 1990, it is manifest that in the latter period many early switchers reverted to domestic markets.

3.16. **Tunisia**. The analysis for Tunisia has been based on the annual enterprises' surveys prepared by the INS covering 1985-1990. Because of the partial representativeness of the sample of firms in the surveys, only the characteristics of new entrants in the export markets that were previously selling on the domestic market are discussed.[9] On the other hand, an even larger proportion of firms tried to switch from the status of exporters to domestic sellers. In both cases, only about half of the firms that switched remained in the new status. The results of Table 3.4 suggest that trade liberalization and export incentives policies succeeded in affecting the perception that profitable opportunities existed in the export sector. In fact, the share of domestic sellers that became exporters doubled from 2.7% of total domestic sellers in 1985-87 to 5.4% in 1988-90. These firms tended to be larger, have a bigger foreign ownership share, and have a higher capital stock per employee than domestic sellers.

9/ See Francesco Daveri, 1994, "*Which Tunisian Firms became Exporters? Evidence from Survey data.*

Table 3.5: TUNISIA - FIRMS SWITCHING FROM DOMESTIC TO EXPORT MARKETS
(domestic sellers at t-1, exporting at t (EDS))

Years (t)	Number of EDS firms (1)	Ratio of EDS to domestic sellers at t-1 (in %)	Exports of EDS in percentage of total EDS sales		Average number of employees of EDS at t (increase from t-1 in parenthesis)		Net fixed capital stock per employee Ratio of EDS to domestic sellers at t (in %)	Shares of foreign ownership at t (in %)	
			t-1					Domestic sellers	EDS
1986	26	2.7	0.04	0.44	129.5	(-5.5)	90.8	2.5	11.7
1987	34	2.7	0.05	0.52	107.0	(+9.3)	182.0	2.5	16.7
1988	46	4.0	0.03	0.44	98.0	(+5.6)	239.2	2.6	5.9
1989	56	5.6	0.08	0.46	128.3	(+12.7)	142.3	2.4	6.8
1990	48	5.2	0.04	0.52	103.3	(-2.8)	178.5	2.4	8.0
Average	42	4.0	0.05	0.48	113.2	(+3.9)	165.9	2.5	9.8

Note: (1) Raw data comes from the INS survey of enterprises (1985-90) covering approximately 2000 firms. The elimination of non manufacturing firms and unavailability of certain variables have reduced the sample size to some 1350 observations per year.

3.17. The characteristics of successful exporters. Do successful exporters share the same characteristics in Morocco and Tunisia? The question has been investigated, using linear regression analysis. The analysis may help to identify the strengths and vulnerabilities of the export sector and possible areas of policy intervention in the two countries.[10]

3.18. The major findings for Morocco are as follows:

- A positive and statistically significant relationship between export performance (measured by the export to production ratio) and the *foreign share in total equity* of both enterprises and sectors. This indicates that enterprises that have partnership with foreign firms are more successful in penetrating external markets[11] (and vice versa).

- A positive and significant correlation between the size of the firms and export performance, implying that the larger a firm, the better it can afford the requirements of entering export markets.

- As sectoral concentration increases, the export performance first deteriorates and then improves[12]. Low levels of concentration are consistent with open entry; similarly, economies of scale may be important for increasing the export orientation of firms with high levels of concentration.

- As geographical concentration of industries (within Morocco) increases, industrial firms become less export oriented. This may be because of lower productivity due to infrastructural bottlenecks and the cost and availability of industrial land.

3.19. The main results for Tunisia are as follows:

- As in the case of Morocco, there is a positive and statistically significant relationship between export performance and the foreign share in total equity of

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10/ About 5200 manufacturing firms in Morocco and 970 in Tunisia have been included in the sample. Results for Morocco are taken from World Bank (1993), "Developing Private Industry in Morocco", Vol. II, Annex I. The analysis for Tunisia is based on the same explanatory variables used for Morocco.

11/ It is also interesting to note that the firms with foreign partnership are in general larger than other private firms, but smaller than public enterprises.

12/ To capture the relationship between concentration and export shares, we have used the square of the sectoral concentration ratios as an explanatory variable. The estimated coefficient is positive and significant.

manufacturing firms, indicating that enterprises with a foreign partnership are better able to meet price and quality standards of the export markets than firms without such a partnership.

- As in the case of Morocco, there is a positive and significant correlation between the size of the firm and export performance.

- There is a negative and significant correlation between average wages and export performance, which underlines where Tunisia's comparative advantage has lain. It may also indicate that the skill requirements for assembly-type subcontracting operations are relatively low.

D. THE TEXTILE, CLOTHING AND FOOTWEAR SECTOR

3.20. The sector that contributes most to exports in both Morocco and Tunisia is the TCF sector (see Box III.1). In Morocco, public investments have traditionally focussed on the textile sub-sector ("spinning and weaving") to secure key supplies to state-owned enterprises such as sugar refineries (bags); neglecting, at the same time, the dyeing and finishing sectors and impairing the creation of strong linkages with the garment exporting industry. Thus, Morocco is now a major importer of synthetic and blended yarns and fabrics, printed, dyed, and specially processed fabrics (the garment sector relies on foreign cotton fabrics for 90% of its needs).

3.21. In Tunisia, the TCF sector is dominated by the clothing sub-sector ("garments and knitwear", employing almost 70% of total workers in the TCF). Until very recently the structure of the sector was totally dualistic, with manufacturers producing for the domestic market operating in an import-protected environment and those producing for exports mostly operating with subcontracting arrangements. The lack of integration between the textile and the clothing sectors is even more accentuated in Tunisia than in Morocco. In 1990,[13] most of raw materials of the TCF were imported. These inputs covered 93% of the inputs needed by the off-shore enterprises and 12% of those operating in the domestic market.

3.22. In the past, the growth of the TCF sector in both Morocco and Tunisia has been sustained by cheap labor, proximity to Europe, and cultural ties, especially with France. Both countries have enjoyed preferential access to the European market (see Chapter V) for their TCF products with the exception of only three items for Morocco and two for Tunisia that are "voluntarily restrained", that is under quota. But quotas have not represented a constraint: in

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13/ See Tunisia, Ministry of Economy, *"Le secteur textile tunisien - situation actuelle et perspectives de développement"*.

Morocco, they have been surpassed even by 200% and 300% without corrective actions being taken: in Tunisia, quotas have been filled only by around 50%.

3.23. Many recent developments related to the TCF sector will present Morocco and Tunisia with challenges and opportunities in coming years:

(a) **The Future of Multi-Fiber Agreements.** International trade in textiles and clothing has so far been governed by the Multi-Fiber Agreement (MFA). However, recent Uruguay Round negotiations have agreed to dismantle the MFA and subject trade in textiles to general GATT rules. A transitory period of ten years has been allowed for this merger to take place starting from January 1994. Although Morocco and Tunisia are not part of the MFA, its dismantling may seriously affect their preferential access to the European market; intense competition will in fact develop as other countries, in particular the Asian competitors, are granted equal access.

(b) **Restructuring of the Textiles and Clothing Industries in Europe.** The European TCF sector is undergoing a deep restructuring. First, firms are specializing in the upper segments of the clothing industry: more technology is involved in this trend, mainly a higher degree of automation, and a better management of supply and raw materials, semi-products and output and distribution. Second, the manufacturing of non labor-intensive products are being delocalized to developing countries. Finally, a special fund (RETEX) of ECU 500 million has been set up and will be allocated to restructure the TCF in countries such as Greece, Portugal and Spain which are faced with strong competition from outside Europe.

(c) **Eastern European Competitors.** The Eastern European countries have recently restructured their textiles industries, partly with the financial and technical assistance of the EU, and have succeeded in negotiating favorable bilateral trade agreements with the EU. In addition, like Morocco and Tunisia, these countries enjoy the advantages of cheap labor and proximity to the EU, and can therefore present major challenges for TCF exports from Morocco and Tunisia, especially as far as subcontracting is concerned.

3.24. In recent years, TCF exports from Morocco and Tunisia may have lost competitiveness, relative to other Mediterranean and Asian countries[14] (see Box III.1). The slow

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14/ Table III.1 in Box III.1 shows indicators of cost-competitiveness in a sample of countries competing in the European TCF market. The non-EC countries were included if their share in total EU imports of TCF products was relatively significant and increasing over 1985-1990. Two measures of cost competitiveness are unit labor costs and real exchange rates. Unit labor costs are calculated as the ratio of average wages to labor productivity (defined as the ratio of value added to labor), both expressed in nominal terms. Real

growth of productivity; the focus on a few products (low quality and low technology) and markets; the small size of garment-producing firms; and the weak linkages between spinning, weaving, and finishing, on the one hand, and garment production, on the other, are some of the problems shared by both countries.

3.25. To solve its problems, and meet the new challenges ahead, the textile industry's continued export drive must be fueled by an increasing amount of investment. Modernization and restructuring of spinning and weaving sectors and development of the finishing sector are crucial in enhancing the competitiveness of the textile industry. In this endeavor, attracting foreign textile companies (French, American, and Japanese) which are undertaking a delocalization process can be instrumental.

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exchange rates are based on national currencies per European Currency Unit (ECU), deflated by relevant consumer price indices (CPI). Real wages per employee and real value added per employee, are calculated in national currencies and deflated by the CPI and the wholesale price indices, respectively.

BOX III.1

THE TEXTILE, CLOTHING AND FOOTWEAR SECTOR

Morocco. In Morocco, the TCF represented 17% of value added, 25% of investment, and 37% of exports of the manufacturing sector in 1990. There were almost 1,800 enterprises, two-thirds of them private, employing 155,000 people, or 41% of total employment in the manufacturing sector. During 1986-89 output grew by 6% per year, relative to 2.8% in the manufacturing sector. About 44% of enterprises are in clothing, 36% in textile and 10% in footwear and leather.

Tunisia. In Tunisia, the TCF is even more important than in Morocco: the sector represents about 32% of value added, 33% of investments and 51% of exports of the manufacturing sector. During 1986-89, it registered a real growth of 8.6% a year, compared to 5.4% in the manufacturing sector. In 1991, there were 1765 enterprises, accounting for 40% of total manufacturing employment. Of these, 978 were "totally exporting", with the overwhelming majority (90%) falling into the clothing sector (garment and knitwear). The clothing sector employs about 70% of TCF workers; the textile sub-sector about 25%, and the leather and shoes sub-sector about 5%.

Cost Competitiveness: International Comparisons

Table III.1 shows estimates of cost competitiveness indicators for a sample of countries that compete for the EU imports of TCF. During 1985-90 Morocco shows the highest decline in real wages, measured in national currency. Real wages increased slightly in Tunisia and relatively more in the Asian competitors (Thailand, the Philippines, Indonesia and Malaysia). However, looking at a partial measure of productivity -- real value added per labor -- the Asian competitors registered a fast growth. This indicator shows a decline for Morocco and a moderate increase for Tunisia. Unit labor costs, defined as the share of wages in value added, appear therefore to be higher in Morocco than in all the countries of the sample, with the exception of Hungary and India. During 1985-90, the Asian countries were also able to devalue their currencies, with respect to the ECU, much more than Morocco and Tunisia. All these indications show that, within the chosen sample, Morocco and Tunisia have lost competitiveness.

Table III.1: COST COMPETITIVENESS IN THE TCF SECTOR(1)

	Share of exports to the EU in the sample		Unit labor costs		Real Wage per employee in nat. currency	Real Value per employee in nat. currency	Real Exchange Rate vs ECU(2)
	1985	1990	1985	1990	1990 Index (1985=100)		
Morocco	5.4	6.6	0.78	0.76	90	94	75
Tunisia	6.1	5.9	0.72	0.69	105	112	64
Turkey	15.2	16.8	0.34	0.32	100	130	84
Hungary	3.9	2.9	0.62	0.81	100	99	77
Greece	15.5	8.2	0.51	0.52	96	113	95
Portugal	21.0	19.3	0.53	0.55	108	92	100
Malaysia	1.7	2.5	0.59	0.48	111	138	42
Indonesia	1.3	5.0	0.29	0.21	119	152	49
Thailand	4.5	5.8	0.37	0.38	133	126	63
Chine(3)	14.3	16.2	0.16	0.18	112	129	50
India(4)	11.1	10.7	0.67	0.71			

Notes
(1) See Annex IV for more details and information sources of cost competitiveness in the TCF.
(2) A decrease means depreciation.
(3) Only textile - Social charges not included in the unit labor cost.
(4) Social charges are not included in the unit labor cost.

E. BUILDING EXPORT CAPABILITIES

3.26. International experience has shown that while policy reform to *get the prices right* is a necessary condition for international competitiveness, it does not by itself guarantee the ability to compete in export markets. The spread of new information-based technologies, even in the traditional labor-intensive export sectors such as textiles and garments, is reducing the incidence of labor into total costs and putting a greater premium on quality, speed, and reliability of delivery.[15] Therefore, unless macro reforms are supported by measures aimed at enhancing exporters' capability to produce goods that conform to international norms for price and quality, a sustained export growth is unlikely to materialize.[16]

3.27. Moreover, as shown in chapter IV, the emergence of the South East Asian countries, able to compete on the basis of lower costs, and the ongoing technological progress in virtually all industrial segments underscore the importance of export-push strategies centered more on quality and adaptability rather than on cost competition. For a quality-based export strategy to succeed, the existing and potential exporting firms must be supported by measures that develop their technical capabilities.

3.28. The development of technological-based export capabilities in Morocco and Tunisia would include: (i) building firms capabilities to absorb new/existing technology; (ii) the diffusion and adaptation of technology[17] through improved standards and quality control systems and through industrial extension services; and (iii) export promotion services, especially to potentially exporting firms.

15/ For an analysis of the role and importance of information technology at different stages of textiles and garment production, as well as the role it plays to simplify the production cycle and improve quality, important for developed countries in competition with low labor-cost rivals, see Financial Times Survey, October 18, 1993, p. III .

16/ In a sense, what matters most for Morocco and Tunisia is achieving the long-term ability to compete in the international markets. This refers to the ability to create an economic structure and export composition that adjusts flexibly to rapidly changing patterns of world demand. For further analysis of this issue see Alavi, H., 1990, "International Competitiveness: Determinants and Indicators," Industry Series Paper No. 29, The World Bank.

17/ The focus on the diffusion of available technology is justified for three main reasons. First, both countries have already developed the conditions necessary for attracting foreign technology and expertise, and have therefore a relatively easy access to foreign technology. Second, given its availability from foreign sources, the local development of technology is both expensive in human and financial resources and its commercialization cannot be guaranteed. Third, the majority of potentially exporting firms in the two countries are small firms which need basic technical assistance.

3.29. **Standards and quality control.**[18] An effective standards and testing regime is critically important in entering and maintaining new export markets where product quality influences buyers' decisions. For example, the standards set by the International Standards Organization (the so called "ISO9000") are becoming increasingly recognized and required in a range of industries and products (in the EU they have been adopted but are not yet obligatory). Even in the garments sector where buyers often supply the material and designs and take responsibility for checking quality, the adoption of ISO9000 by subcontractors is becoming an important element by which European firms discriminate among countries to relocate part of their production. The EU is also setting the rules for common health and environment standards that will be shared by member countries and will soon be required by those that wish to export in the European market.

3.30. A standard and testing regime has been in place for some time in both Morocco and Tunisia. However, because of its inadequacies in promoting the upgrading of technology, manufacturing enterprises are at a disadvantage relative to foreign enterprises. For example, in Morocco there exists a metrology system (to define basic measurements and weights to be used in industrial production and trade), a legal framework and a representative body to develop standards and certify product adherence to these standards. But the heavy involvement of government agencies, with different priorities and lack of coordination, has reduced the effectiveness of the process of creating and managing standards.[19] In addition, there is no accreditation system capable of ensuring that the existing testing laboratories (approximately 130, operated by both public and private institutions) have adequate technical competence and equipment, and follow agreed procedures. Thus, the testing laboratories are not recognized internationally.

3.31. In **Tunisia**, the *Institut National de la Normalisation et de la Propriété Industrielle* (INNORPI) is the main public agency in charge of registering patents and issuing standards. Product certification is beginning to be contracted out to private laboratories. Unlike the case of Morocco, the private sector has been actively adopting improved standards, sometimes ahead of INNORPI, in particular those of the EU. Therefore, increasing private sector representation in INNORPI may help the further involvement of the private sector in the design of quality schemes relevant for export. In addition, in Tunisia, as in Morocco, there is a need for internationally recognized laboratories and for testing and certification organizations.

18/ The concept of standards and quality control includes metrology and testing activities. Metrology, or measurement systems, can be classified into legal and industrial metrology. The former deals with the maintenance of basic measurement standards, while the latter refers to calibration of equipment used in the industrial process. Standards relate to the definition of the conditions that must be fulfilled for a product or process to attain international standards such as ISO9000. Testing is a process by which products or processes are examined to verify their conformation to set standards.

19/ Over the last ten years, a total of 600 standards have been developed in Morocco, half of which are for the manufacturing sector, compared to about 15,000 on average for industrial countries.

3.32. **Industrial Extension Services to Promote Exports.** An improved standards and testing regime is an important condition for upgrading quality and penetrating export markets. Once in place, it has to be understood and appropriated by enterprises . This calls for a structure of firm-level extension services (to advise on product adaptation, management, marketing). These services are provided in Tunisia, for certain sectors, by a few relatively sophisticated technical centers;[20] however, an information and referral mechanism is needed that makes private enterprises aware of the services available to them and helps them select the best provider. Morocco has a similar but relatively weaker structure ; and it also needs information and referral mechanisms to support industrial firms.

3.33. **Export promotion services.** Well developed export promotion services exist in both Morocco and Tunisia. In Morocco, the *Centre Marocain pour la promotion des exportations* (CMPE), under the supervision of the Ministry for Foreign Trade, is the main organization in charge of export development. It carries out sectoral and market studies and product tests in foreign markets; it organizes trade fairs and participation in international exhibitions; and, most importantly, it helps firms to identify new markets and to establish trade contacts. The CMPE has become more effective and efficient after the recent restructuring carried out in 1991;[21] it now targets exclusively new markets (for example, it does not cover the traditional markets of France and Belgium) and it is being involved in helping exporters to adapt products to international demand. It has recently started making exporters pay for some of the services provided. The remarkable success registered in 1992-93 by Moroccan exporters in the British market can be largely attributed to the promotion efforts of the CMPE.

3.34. In Tunisia, the Center for the Promotion of Exports (CEPEX), a parastatal organization, is the main agency in charge of export promotion. The National Center for Fairs and Exhibitions (CNFE), attached to the CEPEX, organizes the participation of firms to fairs abroad; and the FOPRODEX, a fund for the promotion of exports (also managed by CEPEX), allocates grants and loans to support export promotion actions. The services provided by these agencies have been valued by exporters; but targeting (of export markets and activities) is weak and monitoring of the effects on the beneficiaries rarely undertaken; moreover, most services are free while they could, instead, be marketed at a price, so that scarce public resources can be channelled to non traditional markets and to support new potential exporters. To increase the participation of the beneficiaries, the boards of these agencies should also include more representatives private sector exporters.

20/ The most important technical centers are: the newly created (1992) and efficient *Centre Technique du Textile* (CETTEX), the *Centre Technique des Industries Mécaniques et Electriques* (CETIME), the *Centre National du Cuir et de la Chaussure* (CNCC), and the *Centre National de l'Informatique* (CNI).

21/ It is organized in three technical (Information, Research, Technical assistance) and five regional departments: USA, Canada and UK; Germany, Austria, Switzerland and Scandinavia; Spain, Portugal, Italy and Greece; Maghreb, Africa; and Middle East and Asia. It has a staff of 80 people.

F. CONCLUSIONS

3.35. Adjustment policies and trade liberalization reforms have enhanced, in both Morocco and Tunisia, the export orientation of the industrial sector, but have not led to a significant diversification of the export base. The manufacturing sector is characterized by the existence of many small and a few large firms, even in export-oriented sub-sectors. The exporting firms are in general larger and typically associated with a foreign enterprise. They have access therefore to financial, technical, marketing, and other expertise which enhances their ability to meet norms and standards of the importing markets. The empirical evidence discussed in this chapter has also shown that in both Morocco and Tunisia (i) small firms are less likely to be or become exporters, probably because of the high entry and transaction costs of accessing foreign markets; (ii) many exporters, notably in Tunisia, are subcontractors of European firms; (iii) industrial linkages between exporting and non-exporting firms are weak; and (iv) there is a lack of product and market diversification.

Is there a role for public intervention?

3.36. Does public intervention have a role to play in any of the issues described above? As export growth is the key element of the development strategy adopted by the Governments of both Morocco and Tunisia, the next paragraphs outline some possible answers.

3.37. **Strengthening the support to small firms.** World[22] experience suggests that support mechanisms for providing technological and marketing services are important for the development of small and medium enterprises (SMEs), especially in export markets. But should governments provide such support? International experience indicates that private support mechanisms, such as industrial and exporters' associations, chambers of commerce and export traders can be more effective than public institutions with weak institutional capacity, bureaucratic structures and limited direct expertise.

3.38. Public authorities should limit themselves to fostering a favorable business environment, exposing firms to domestic and international competition, supporting education and training, and minimizing administrative constraints on the working of markets. Pro-active efforts by governments to promote exports should not include the direct delivery of export services. However, financial public support could be allocated to encourage the use of export marketing supports and to facilitate the establishment of associations that respond to the needs of SMEs; in turn, these associations should use these funds exclusively to provide export marketing and other services to the SMEs.

3.39. **Subcontracting** appears to be the privileged form of foreign participation in the industrial sectors of both Morocco and Tunisia. Subcontracting has developed on the basis of

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22/ See Brian Levy, 1994, "Successful small and medium enterprises and their support systems : a comparative analysis of four country studies", mimeo.

cheap labor and extremely generous fiscal incentives and has been encouraged by the current system of export quotas agreed with Europe. Most off-shore enterprises operating in both countries are subsidiaries of foreign firms that import all the inputs and use local manpower and infrastructures. Because the links with the local economy are tenuous, they can easily relocate when the conditions offered by other countries become more favorable. The restructuring that is currently being undertaken by major European industries and the upgrading of the current Association Agreements between the Maghreb countries and the EU into free trade agreements (see Chapter V) may have negative effects on the amount of future subcontracting that Morocco and Tunisia will be able to attract. Thus in the 1990s, a much more aggressive subcontracting policy should be developed. This is because subcontracting can be an important channel to accumulate industrial and technological experience from which local capacity can develop. Industrial and exporters' associations should help SMEs to actively seek and initiate subcontracting arrangements with strategic foreign industries. In addition, establishing technical assistance and quality control programs to increase the efficiency of local subcontractors[23] in order to (i) strengthen the linkages with the domestic economy, and (ii) upgrade, with time, some of subcontracting relationships into full partnerships relationships are also important. Finally, investment abroad by Moroccan and Tunisian firms would help them to establish technology dissemination channels and to obtain shares in foreign markets.

3.40. **Industrial linkages.** Industrial inter-firms linkages, backward and forward, and intra-sectoral, are scarce in Morocco and Tunisia. Thus, technical knowledge and export capabilities of larger firms are not disseminated to smaller firms that may have export potential. To promote industrial linkages, public support could be reallocated to sustain the development of industrial associations, that provide common services to all members and in particular to small firms; and of subcontracting relations between large and small firms.[24] The incentive framework may also play a role. In Tunisia for example, the recently approved Unified Investment Code has extended to indirect exporters the fiscal advantages previously enjoyed only by exporters; this new framework should help to promote some integration between domestic producers and exporting firms.

23/ A first step in this direction has been taken in the new Investment Code, by extending to partial and indirect exporters the same fiscal incentive given to totally exporting firms.

24/ In recommending policies and programs to promote industrial linkages, the experience of countries that have succeeded in linkage development could be instructive. For example in Singapore, the government has actively encouraged the formation of subcontracting networks through the *Local Industries Upgrading Program (LIUP)*. The government agency responsible for this program (The Economic Development Board) has provided a package of assistance including cost sharing grants to obtain consultancy assistance, loans for the purchase of equipment, and support for the provision of relevant courses by training institutions, in return for a commitment from multinational companies to provide on-the-job training, advice and other assistance to participating firms.

3.41. **Diversification.** The increase in the geographical and sectoral concentration of exports for both countries indicates a need of diversification. As the search for a radical and systematic market diversification may need long and costly efforts, sectoral diversification should perhaps be the priority, through a strengthening and broadening of upstream segments in the existing export sectors. A diversified production structure and an export sector built on strong comparative advantages represent a necessary condition for a future geographical diversification. To sustain diversification efforts, many countries have adopted special "Funds", supported partly by the State and partly by the exporters themselves. In 1993, the "Société Marocaine d'Assurance à l'Exportation" proposed the creation of a "*Fonds de Promotion Economique Extérieure des Exportations*", to finance the CMPE, and subsidize the creation and diffusion of documentation on foreign markets and all activities related to the promotion of exports. However, the 1994 Finance Law did not approve the financing of the Fund, due to budgetary constraints.

3.42. International experience on the effectiveness of similar Funds is mixed.[25] In Morocco, it would be advisable to let most current export promotion activities become private-supported. At the same time, the idea of a Fund whose resources are geared to increasing the technological and export capabilities of all firms, particularly small ones, should be retained. Public intervention in this domain may be justified because of the existence of informational and other market failures associated with the provision of financial, marketing and technical support to small firms. The development of a broader private, export-oriented sector composed of small and medium enterprises would imply less industrial concentration, a more flexible and competitive domestic economy and the creation of new job opportunities. The following section suggests some ideas for a program for building export capabilities that could be financed by the Fund and tested on a pilot basis. It would have to be of a short term nature, up to eight years, which is the maximum lenght of time allowed by the recent GATT agreement to phase out export subsidies.[26]

25/ International experience (see Keesing, D. and A. Singer (1990), "How support services can expand manufactured exports", PRE Working Paper no. 544, World Bank) shows that six factors have contributed to the ineffectiveness of public trade promotion organizations: the unsuitability of government employees to the task, the inflexibility of government procedures in regard to expenditures and staffing, the confusion of purpose resulting from the assumption of regulatory and administrative roles, the perpetuation of wrong attitudes and strategies, misguided evenhandedness, and the neglect of the development of commercial services. More recent evidence on the effect of promotion efforts on small and medium enterprises, (see "Can Intervention work? The role of Government in SME success", World Bank Conference, February 1994), suggest that collective export marketing supports are indeed very important. However, private mechanisms seem to be more efficient than public ones. The support mechanisms most valued by small enterprises are: (a) participation in trade fairs at home and abroad; and (b) information on export opportunities abroad.

26/ Moreover, the authorities should make sure that public funds are reallocated from other export promotion activities to the suggested export program and no additional public money is spent on it. In fact, according to the recent GATT agreement developing countries are subject to a "standstill agreement" whereby existing export subsidies must be frozen at the current level and phased out over an eight year period, starting from

3.43. The proposed program would provide assistance to potential exporters -- mostly small enterprises -- to design and introduce their products in foreign markets. It would be based on a cost-sharing scheme with the participating firms, and managed by the two export promotion agencies, the CMPE in Morocco and the CEPEX in Tunisia, in close association with private sector groups such as CGEM and UTICA as well as the existing technical centers.

3.44. The program would ideally follow these steps: First, products with export potential would be identified by the firms interested in participating in the program and submitted to the CMPE and CEPEX. Second, the selected products would be presented to potential buyers to solicit their interest and to help meeting importers' standards. Buyers' feedback would be important regarding the quality requirements in export markets. Third, buyers' feedback would be communicated to the participating firms by the foreign experts and through the assistance of specialized technicians, technical and design information would be incorporated in the firms' products. Finally, CMPE and CEPEX would prepare promotional campaigns in collaboration with buyers' organizations to market the upgraded products.

January 1995.

CHAPTER IV: COMPETITIVENESS AND COMPARATIVE ADVANTAGES

A. INTRODUCTION

4.01. The previous chapters analyzed the export performance of Morocco and Tunisia during the 1980s. Overall, the two Maghreb countries just managed to retain their market shares in both the EU and the OECD, but did not succeed in increasing their overall penetration in the main destination markets.

4.02. How does this performance compare with that of other countries competing in the European market? The question is investigated in the next two sections by looking at: (a) the evolution of the market shares, and (b) the specialization patterns in Morocco, Tunisia and in some of their competitors. It is shown that during the last decade, the latter strengthened their market share in the European market despite the fall in demand. Why and how did these countries succeed? Did they emerge because of advantages in costs, productivity, technology? Comparisons of cost competitiveness (unit labor costs, real exchange rates, energy and transportation costs) are shown in section D to give a measure of the relative competitive standing of Morocco and Tunisia. Finally, the last section compares indicators of factor endowments: what counts in the long run is a country's ability to compete and grow, which in turn depends on the endowments, natural and created (e.g., the education of the labor force and the status of infrastructure).

B. THE PENETRATION OF THE EUROPEAN MARKET

4.03. **The openness of European markets.** Increasing protectionism in the industrial countries, notably in the European market, is often blamed for the poor performance of developing countries' exports. Did Europe become more protected during the last decade? Indeed, in value terms the ratio of total European imports to GDP decreased from 24.6% in 1980 to 23% in 1991. But relative prices (notably fuel imports) were largely responsible for this result as they grew much slower than the GDP deflator. In fact, in constant 1987 dollar prices, the ratio of European imports to GDP rose from 20.9% in 1980 to 23.4% in 1991. Moreover, there is no evidence of increased protectionism against Morocco and Tunisia: in 1991, the ratio of European countries' imports from Morocco and Tunisia to their GDP increased by 4% and 5% respectively.[1]

1/ The slight difference between Morocco and Tunisia is mostly due to the larger share in Germany's imports. In Germany the ratio of imports to GDP reached 10.7% in 1991.

4.04. **The global sharing of European markets.** The analysis of the intra-European trade (see Table 4.1) highlights the uneven resistance opposed by EU countries to non-EU competitors during 1970-1991. In most labor intensive sectors the share of EU members in global EU imports fell significantly. However, EU countries were able to stabilize and even to increase their shares of capital and technology intensive products.

Table 4.1: THE SHARE OF EU COUNTRIES IN GLOBAL EU IMPORTS

IN %	1970	1991
Manufactured Fertilizers	68.2	55.6
Other Chemicals	65.4	72.3
Clothing	70.5	43.7
Yarns & Fabrics	74.2	66.9
Footwear	78.2	60.2
Leather	59.7	51.6
Machines, Tr. Eqpt., Elect. Mach.	68.5	61.3
Other Manufactures	53.8	58.7

Source: COMTRADE-United Nations

4.05. The biggest loss in the market share of European countries occurred in the **textile, clothing, and footwear** industries. In particular, only 44% of imports of clothing still came from European countries in 1991, relative to more than 70% in 1970. Taken together, the share of Morocco and Tunisia increased from 0.2% in 1970 to 5.2% in 1991. Though satisfactory, this result pales in comparison to the penetration of the market gained, mostly in recent years, by Asian challengers (see Box IV.I). The EU's loss was substantial in the footwear industry (from 78% of global EU imports in 1970 to 60% in 1991). By contrast, the EU industry of yarns and fabrics successfully resisted foreign competition: imports from EU member countries, which represented 74% of total EU imports in 1970, still accounted for 67% in 1991. The winners were developing countries, mostly Asians, and Turkey (that increased its share by about five percentage points) while the gains of Arab countries, including Morocco and Tunisia, were modest.

4.06. In other sectors, the loss in market share of European member countries was limited. For example, within the broad aggregate of **metallic industries** the EU preserved its supremacy in technology and capital-intensive products, whereas new competitors increased their exports of electrical and electronic equipment (still highly labor-intensive products). Finally, European **chemical industries** (mostly capital and technology intensive) augmented their share from 65% in 1970 to 72% in 1991, thereby reinforcing the degree of European industrial interdependence. Among chemical products, manufactured fertilizers appear to be an exception, as non-EU competitors (in particular the Arab countries) increased their share of imports by 13 percentage points.

BOX IV. 1

The Clothing Sector: The Challenge of East Asia

The challenge represented by East-Asian countries can be seen by analyzing an important exporting sector, clothing (in 1992 clothing represented 27% of total manufactured exports in Morocco and 43% in Tunisia). Morocco and Tunisia held about 0.1% of EU imports of clothing in 1970. Two decades later they held 2.7% and 2.5% of this market respectively. The pace of this expansion was uneven, the bulk of Tunisian gains occurring between 1973 and 1983, whereas the Moroccan market share expanded rapidly in the eighties. Although satisfactory, these gains must be compared with those of competitors. To this aim, we will analyze the behavior of close European competitors (Spain, Portugal and Greece), other Mediterranean countries (Turkey, Israel and Egypt), East European countries (Poland, Czechoslovakia and Hungary), the four NICs (Hong-Kong, Korea, Singapore, Taiwan), the new Asian NICs (Thailand, Malaysia, Philippines), China and India.

Perhaps the best performer was Turkey, which increased its share of EU imports from basically zero in 1970 to 6% of EU imports of clothing in 1990. Portugal also increased very fast its share in the EU market, although at a slower pace than Turkey. Taken together, these two competitors represented more than 11% of total EU imports of clothing in 1990, relative to 1.3% in 1970. Egypt, Israel and Spain hardly increased their shares, which remained below 1%.Greece managed to increase its share from 0.8% in 1970 to 5% in 1980 but then failed to keep the pace.

Among the Asian countries, the share of the four NICs declined from 20% of EU imports in 1980 to 11% in 1990. These countries proved capable of moving from clothing to more technologically intensive products, for example those in electronics. By moving upstream they left more room to other developing countries. Such space was occupied by the new Asian challengers, Thailand, Malaysia and Philippines and by China and India. The share of these countries, taken together, picked up from 4.7% of EU imports in 1980 to 11.5% in 1990. China alone almost doubled its share from 3.7% in 1988 to 6.9% in 1991.

Finally,the share of the three East European countries declined from 1974 to 1988 increasing then from 2.2% of the market in 1989 to 3.2% in 1991. This reflects probably the disruption of trade flows with the countries of the former Soviet Union and its aggressive redirection towards the European Union; and a political eagerness, by the Union itself, to help these countries or at least the desire to test the quality of East-European products, which were not available before. However, if this performance proves to be long-lasting, East European countries may pose a real threat to the growth opportunities of Morocco and Tunisia.

C. COMPARATIVE ADVANTAGES OF MOROCCO AND TUNISIA

4.07. The progressive penetration of the European market achieved in the last twenty years by Morocco, Tunisia, and their competitors may be explained by changes in international

comparative advantages. Following the seminal work of Bela Balassa[2] in 1965, the concept of "comparative advantage" has been often used to compare the specialization pattern of different countries. In what follows, we measure the "revealed comparative advantages"[3] by effective international trade flows, that is, by the pattern of surpluses (strengths) and deficits (weaknesses) across products for any given country. In turn, these advantages stem from natural resources, lower relative costs of production and monopoly elements gained through the creation of "new" products, and their efficient diffusion and marketing.

4.08. For any individual country comparative advantages are far from being fixed. With the exception of natural resources endowments, they evolve over-time, depending on micro and macroeconomic policies. New sources of comparative advantages can emerge in dynamic enterprises at the micro level. Nations able to generate, or attract, these enterprises are thus capable of challenging even more developed countries, that had previously acquired absolute advantages.

4.09. Table 4.2 presents the evolution of revealed advantages and disadvantages for Morocco and Tunisia. Some cautions should be taken in interpreting these results, in particular those concerning the disadvantages, as imports may be highly influenced by existing rates of protection.

2/ See Balassa B., 1965, "Trade Liberalization and Revealed Comparative Advantages", Manchester School of Economic and Social Studies; see also Lary H, 1968, "Imports of Manufactures for Less Developed Countries", National Bureau of Economic Research.

3/ The indicator of comparative advantages adopted in this Chapter was developed at the Centre d'Etudes Prospectives et d'Informations Internationales in Paris (see G. Lafay "*La mesure des avantages comparatifs révélés*", Economie Prospective Internationale, La Documentation Française, no 41, Spring 1990). For a single product k, in any given year, the indicator is as follows:

$$I_k = (X_k - M_k)/Y - [\,((X_. - M_.)/Y) * (X_k + M_k)/(X_. + M_.)\,]$$

Where X_k, M_k are respectively exports and imports of product k measured in dollars, and $X_.$, $M_.$ are total merchandise exports and imports , and Y is the country's GDP. For any given year, the sum of the indicators across all k products is equal to zero. For any single k product, a high value of I_k indicates that the country has a strong comparative advantage (a strength) in product k. Conversely, a high negative value indicates a strong disadvantage in product k. If I_k is close to zero, the product in question represents neither a strength nor a weakness for the country. The higher the individual indicators, the more specialized is the country. A country with a low value of I_k has a broad-based economy, but without strong leading positions at the international level. Of course, the more detailed the sectoral breakdown used for the analysis, the higher the absolute values of the indicators tend to be. In the following analysis, 51 categories of products are distinguished, from the two digit level of the Standard International Trade Classification.

Table 4.2: REVEALED COMPARATIVE ADVANTAGES AND DISADVANTAGES

MOROCCO			TUNISIA		
	1970	1991		1970	1991
Clothing	1.3	34.2	Clothing	0.3	95.5
Fish and Prepared	8.7	27.0	Animal, Vegetable oil	5.6	21.5
Fruits and Vegetables	52.8	24.8	Fertilizers manufact.	13.7	20.9
Fertilizers Manufact.	0.9	15.2	Mineral Fuels	35.5	19.9
Crude Fertilizers, Mines	33.4	9.9	Fruits & Vegetables	12.1	6.6
Transport Equipment	-13.8	-14.2	Transport Equipment	-8.2	-15.4
Mineral Fuels	-7.3	-22.8	Textile yarn, Fabric	-8.4	-43.5
Machinery non elect.	-21.2	-26.1	Machinery non elect.	-21.7	-51.6
Cereals and preparation	-2.7	-6.0	Cereals and preparation	-17.9	-5.4
Iron and steel	-11.5	-10.4	Crude fertilizers, Minerals	15.7	-7.4

Source: See Annex IV.

4.10. The specialization pattern of Morocco and Tunisia changed substantially during the last two decades. At the beginning of the 1970s, both countries had surpluses in traditional resource-based sectors and deficits in manufactured products, such as machines, engines and transport equipment. At the beginning of the 1990s, the two countries' relative disadvantages were still concentrated in heavy industrial products but new advantages had emerged, especially in clothing. In 1970, Morocco's comparative advantages were highly concentrated in "fruits and vegetables" and "fertilizers", while its disadvantages were split between non electrical machinery, transport equipment, and fuels. Twenty years later, Morocco showed a more balanced specialization with clothing, fruits and vegetables and fish as the main advantages. This evolution reflects a progress in traditional labor-intensive manufactured products and a reliance on specific opportunities stemming from favorable natural endowments.

4.11. Tunisia started in the early 1970s with a specialization pattern similar to that of Morocco, with a relative strength in mineral fuels, crude and manufactured fertilizers, and fruits and vegetables. The evolution of oil prices in the 1980s, and the rapid decline of its net exporting capacity in fuels, forced Tunisia to diversify the economy. At the beginning of the 1990s, the main comparative advantage was in clothing, followed by olive oil, manufactured fertilizers and mineral fuels. But the traditional fragilities in transport equipment and non electrical machinery have accentuated. In 1991 Tunisia presented also a net deficit in yarns and fabrics, which have been increasingly imported duty free to supply the growing garment export industries. Tunisia seems to have been unable to develop its own competitive yarns industry, or to move upstream in segments of the textile industry with higher value added.

The Specialization Pattern of Competitors

4.12. The results of the specialization pattern of Morocco's and Tunisia's main competitors are developed in Annex IV. This section summarizes the main trends. Among Mediterranean competitors: in the last twenty years Spain maintained a comparative advantage in the agricultural sector (fruits and vegetables), while Portugal acquired new comparative advantages in traditional labor-intensive sectors such as clothing and footwear, as well as in vehicles and electronics (more capital-intensive). Turkey was extremely successful. Starting from a specialization in raw materials in the 1970s, Turkey diversified its comparative advantages between fruits and vegetables, tobacco and clothing; and it succeeded in producing a relative surplus in yarns, iron and steel, thus proving that it was able to create a larger industrial base.

4.13. The main feature of the specialization pattern that existed until the collapse of the Soviet block for the East European Countries (Poland, Hungary, Czechoslovakia) was the lack of strong, well-defined comparative advantages[4]. The effect of the liberalization policies pursued by these countries in recent years has been dramatic. However, the success in gaining market shares may only reflect the need to redirect their exports westward, through aggressive prices and marketing policies. The capacity to consolidate these newly acquired comparative advantages will depend on their capacity to restructure the industrial base.

4.14. Finally, the comparative advantage of Malaysia, Thailand and the Philippines in the 1970s was in a few raw materials. In the 1990s, the specialization of these countries was broadly based: clothing, miscellaneous manufactures, fruits and vegetables, oils and fats, wood and cork, cereals, fish. The success of the most traditional labor intensive industries is progressively attracting other capital-intensive industries with higher value added. These countries were able to avoid deficits in the upstream sectors of the textile industry (yarns and fabrics) and to create new comparative advantages in sectors (footwear, furniture, electrical machinery) where they might soon be competing with industrialized countries.

4.15. It appears therefore that although Morocco and Tunisia have managed to transform and diversify their economy, other countries have done so with more success. It is most likely that more market shares will become available soon in the European market as the old NIC's countries specialize in more capital and technology intensive products. But Morocco and Tunisia will also have to fight against Turkey, and the new South-east Asian countries. They will have to face the competition of countries with very low labor costs. In this situation, there is no other alternative than to strengthen the global competitiveness of the economy and remove all structural constraints to an enlargement of the industrialization process.

4/ Clearly trade deficits and surpluses are not good indicators of comparative advantages if the structure of prices is very distorted.

D. COMPETITIVENESS: INTERNATIONAL COMPARISONS

4.16. The typical indicators of international competitiveness are the price and quality of products. The latter is more difficult to assess and compare among countries because of product differentiation. Thus, this section will rely on measures of labor costs, productivity and exchange rates to compare the price competitiveness of Morocco and Tunisia with that of other countries.[5] Other indicators, such as energy and transport costs, will give an indication, although partial, of the total cost competitiveness.

4.17. **Labor costs and productivity**. Table 4.3 shows measures of labor and productivity competitiveness in the manufacturing sector. The first column gives the ratio of the average wage in the manufacturing sector to GDP per capita, an indication of the return to labor relative to its return in the economy. Morocco displays, after the Philippines, the highest value of this ratio. Morocco and Tunisia are the countries where wages represent the highest proportion of value added, an indication of the predominance of "clothing", a highly labor-intensive sector; and labor costs, as a percentage of GDP per capita, are also relatively high in Morocco and Tunisia.

4.18. The last four columns present the evolution of labor costs from 1985, the base year. The index of real value added per worker shows a slight upward trend in the two Maghreb countries, against a remarkable increase in some other competitors: Turkey, the Philippines, Indonesia. Real wages, measured in ECU, decreased, in percentage, much more in the Maghreb than in the Asian countries. Yet, because of the lower productivity, in 1990 unit labor costs in Morocco and Tunisia were relatively higher, despite the sharp fall of real wages since 1985. Turkey, Indonesia, Thailand and the Philippines were able to combine real wages and real productivity growth (see Table I.6 in Annex III). The analysis of the evolution of the real exchange rate,[6] in the last column of the table, shows a generalized depreciation of national currencies against the ECU (except for Portugal) but at a quite different pace across countries. Asian countries recorded the largest rates of depreciation, while the analysis of bilateral exchange rates (see Table I.9 and I.10 in Annex III) confirm that the Moroccan and Tunisian currencies depreciated in real terms only against the Portuguese and the Greek currencies. Thus, Asian countries were able to increase the competitive edge in their labor costs through a more pronounced devaluation of their currencies.

5/ Details are provided in Annex III.

6/ The real exchange rate has been calculated by dividing the nominal exchange rate (unit of national currency per ECU) by the ratio of national to European consumer prices.

Table 4.3: LABOR COSTS AND PRODUCTIVITY IN THE MANUFACTURING SECTOR - INTERNATIONAL COMPARISONS (1990)

	Ratio of Wage/GDP per capita	Ratio of Labor Costs/GDP per capita	Wages as % of value added	Real Value added per Worker (national currency)	Real Wages in ECU	Unit Labor Costs in ECU	Real Exchange rate:nat. currency vs ECU (1)
				(Indices 1985 = 100)			
Morocco	3.02	3.49	0.36	106	70	80	75
Tunisia	2.42	2.97	0.49	111	62	69	64
Turkey	2.71	3.27	0.22	167	120	89	84
Hungary	0.93	1.33	0.41	117	87	91	77
Greece	1.88	2.35	0.40	126	95	93	95
Portugal	1.06	1.33	0.36	131	119	112	100
Indonesia	1.79	1.82	0.27	106	47	55	49
Malaysia	1.23	1.39	0.19	110	50	56	42
Philippines	3.13	3.19	0.28	130	87	82	63
Thailand	1.68	1.75	0.24	141	84	73	54
China	1.42	1.45	0.17	129	59	56	50

(1) An increase in the index means depreciation.

Source: UNIDO, Yearbook of Industrial Statistics; IMF, International Financial Statistics; Price Waterhouse, 1992, "Doing Business in Turkey, Greece, Portugal, Philippines, etc.."; Bank of Thailand, "Thailand Key Economic Indicators, 1993; Morocco - Ministry of Industry; Tunisia - Ministry of Planning.

4.19. **Energy and transportation costs.** Table 4.4 presents international comparisons of energy and transportation costs. Data show that in Morocco the price of energy paid by the manufacturing sector is, on average, higher than in competitor countries. On the contrary, Tunisia energy prices are in line with those of other countries. The higher cost of energy in Morocco is mainly due to heavy taxation.

Table 4.4: COMPARISONS OF ENERGY AND TRANSPORTATION COSTS

	HEAVY FUEL OIL		ELECTRICITY	WATER	TRANSPORTATION	
	Price per ton in current US$ (1992)	% of Taxes in the Price of Heavy Fuel (1991)	Price per Kw/h in current US$ (1992)	Price per cubic meter in US$ (1991)	Nominal shipment rates (1992)	Nominal transportation rate (1992)
Morocco	215.7	45.0	0.08*	0.33	7.10	9.06
Tunisia	118.1	25.0	0.05	0.54	3.18	9.49
Turkey	164.6	47.5	0.09	–	4.32	5.56
Hungary	117.0	0.0	0.06	–	0.76	0.76
Greece	162.8	41.7	0.06	–	4.07	7.58
Portugal	196.4	41.5	0.14	–	4.37	6.88
Indonesia	–	–	0.07	0.52	4.14	7.24
Malaysia	108.4	–	0.05	–	4.92	6.42
Philippines	139.8	–	0.04	0.21	7.62	10.08
Thailand	–	–	0.08	0.24	4.50	6.19
China	–	–	0.02	–	–	3.43

Source: International Energy Agency, "Energy prices and taxes" (1993); Annuaire Statistique du Maroc (1992); Société Tunisienne de l'Electricité et du Gaz; Bank of Thailand, Key Economic Indicators (1993); Malaysia, Ministry of Mines and Energy; "Review of Electricity Tariffs in Developing Countries during the 1980s", Energy Series Paper no. 32 (1990); IMF Balance of payments data; and "Power Sector Statistics for Developing Countries" (1987 - 1991) by Zamshid Heidanien and Gary Wu , Jan. 1994. Values in % of total trade.

* Data for Morocco are for 1991

4.20. The last two columns of Table 4.4 show nominal shipment and transportation rates as percentage of total merchandise exports and imports.[7] Although caution must be taken in analyzing these figures, it appears that on average Morocco and Tunisia have freight and insurance costs, as well as transportation costs, well above international standards. These data are confirmed by a recent transport study in the Maghreb:[8] freight and insurance costs in the Maghreb countries are about five times higher than in the EU and nearly twice as high as the average cost in developing countries.

7/ The two indicators are based on the transport related items shown in the current account part of the balance of payment. Freight and insurance costs are under the voice "shipment" whereas "total transport" includes various forms of transport costs (passengers, port services etc.). Consequently two indicators of the weight of transport costs in the international transaction can be built: first, the ratio between the sum of "shipment" (credit plus debit) and the sum of merchandise export and import (both in absolute value). This ratio is called "nominal shipment rate". By adding to "shipment" the other transport costs, the second indicator, i.e., the "nominal transport rate" is obtained. Because of the lack of homogeneity in the way transactions are recorded, and the absence of product disaggregation, these measures cannot provide an exact indication of "how much" the transport costs in one country are higher than in others. However, they show a hierarchy that reflects an "ordinal" measure of transport costs.

8/ See World Bank, 1993, "Maghreb Transport and Trade Facilitation Study", draft.

E. INDICATORS OF FACTOR ENDOWMENT: INTERNATIONAL COMPARISONS

4.21. Price competitiveness is a necessary but not sufficient condition to maintain export success. Endowments, both natural and created represent the means by which countries modify, in the long run, their comparative advantages.[9] This section discusses whether differences in factor endowments can be associated to the differences in Morocco's and Tunisia's comparative advantages with respect to their competitors. Factors taken into account are physical capital, human capital and infrastructures.[10]

4.22. **Structural comparisons.** Table 4.5 shows different indicators measured over long periods of time. Between 1966 and 1986 all the economies in the sample increased their openness to international trade. As the level of the openness ratio depends, among other factors, on the size of the economy, what matters is not the absolute level of the ratio but the change over time. In this respect, Turkey was the best performer followed by Spain and Tunisia. The last column shows a measure of the distortion of the real exchange rate. It indicates the extent to which the real exchange rate deviates from a hypothetical free-trade level[11] because of protection and incentives geared to production for the domestic market. Within the sample of countries, Morocco and Tunisia presented the largest real exchange rate appreciation of their currencies.

9/ Historical comparisons of indicators of factors endowments are provided in Annex V.

10/ The indicators are constructed from raw data published as a by-product of the recent reappraisal in applied growth theory. Sources of data are: Barro, R.J. and J.W. Lee, 1993, "International Comparisons of Educational Attainment", unpublished; Summer, R. and A. Heston, 1992, "The Penn World Table: An Expanded Set of International Comparisons, 1950-1988", Quarterly Journal of Economics, no. 106. Behnabib, J. and M.M. Spiegel, 1992, "The Role of Human Capital and Political Instability in Economic Development", unpublished, New York University. Behnabib, J. and M.M. Spiegel, 1991, "Growth Accounting with Physical and Human Capital Accumulation", New York University, C.V. Starr Center Working Paper, December. Dollar, D., 1992, "Outward-oriented Developing Economies really do grow more rapidly: Evidence from 95 LDCs, 1987-1985, Economic Development and Cultural Change, 40 (3). Levine, R. and D. Renelt, 1991, "Cross-country Studies of Growth and Policies", World Bank, PRE Working Paper No. 608, March. Psacharopoulos G. and A.M. Arriagade, 1986, "The Educational Attainment of the Labor Force: An International Comparison", International Labor Review, 125, 5, September; Sen A., 1993, "Economic regress: Concepts and Features", mimeo.

11/ Calculated as the estimated relationship between the price level and per capital GDP (see Dollar (1992), op. cit.).

Table 4.5: STRUCTURAL COMPARISONS

	Trade Openness Ratios (1)		Growth of Real GDP per capita	Reduction of under 5 mortality	Capital Labor Ratios (3) (in %)	Gross Real Fixed Capital Formation per employee in the manuf. sector	Average Appreciation Index (higher value means more appreciated (5)
	(1960-89)	(1974-89)	Ranking in a sample of 150 countries 1960 - 1985 (2)		(1985)	(1989) (1985=100)	(1976-85)
Morocco	46	52	24	57	16	79	123
Tunisia	65	77	26	45	34	86	104
Spain	31	37	28	7	100	131*	89
Portugal	61	69	14	6	63	N.A.	92
Turkey	23	30	41	56	53	100	99
Poland	N.A.	N.A.	N.A.	N.A.	56	163	N.A.
Czechoslovakia	N.A.	N.A.	N.A.	N.A.	N.A.	126	N.A.
Malaysia	94	106	13	31	109	117	88
Thailand	44	52	18	36	26	N.A.	75
Philippines	39	44	67	80	34	N.A.	92

Notes: (1) Openness ratio = (exports + imports)/GDP from the Levine-Renelt data set.
(2) Data from Amartya Sen (1993).
(3) Data on capital stocks in US$ are from Benhabib-Spiegel (1992); data on population aged 25 and over are from Barro-Lee (1993).
(4) Data from UNIDO. Base 1985=100. * Data for Spain are for 1988.
(5) From Dollar (1992). An index value of 100 means that the country has no price and incentive distorsions, given its per capita income.

4.23. Over 1960-85, all the countries listed in Table 4.5 experienced significant increases in their GDP per capita. Out of a larger sample comprising 150 developed and developing countries, Morocco ranked 24, and Tunisia 26. However, they performed worse in reducing mortality rates of children under five years old: Morocco ranked 57 and Tunisia 45. Only the two European countries, Spain and Portugal, were better performers in the reduction of under five mortality than in GDP growth.

4.24. Looking at estimates of capital-labor ratios[12] and investment-GDP ratios, Morocco, Thailand and, to a lesser extent, Tunisia were found to be, in 1985, labor-abundant countries, while Malaysia and Spain were abundant in physical capital. Flow data on investments for more

12/ Data on capital stocks come from Benhabib-Spiegel (1992) and data on economically active population from Barro-Lee (1993). Physical capital stock values are computed through the perpetual inventory method with an assumed yearly depreciation rate of 7% and starting from an estimated initial capital stock in 1960. By dividing capital stocks by the number of economically active people, an admittedly imperfect measure of capital-labor ratio obtains which is comparable across countries.

recent years confirm that Morocco and Tunisia may still belong to the labor-abundant countries while Poland and Czechoslovakia may have moved towards the group of capital-abundant countries.

4.25. **Human capital endowment and investment in human capital** Table 4.6 shows different indicators of educational attainment for a sample of countries. They give an indication of the competitive advantage of each of these countries in the development of human resources, which are essential for increasing labor productivity.[13] Morocco and Tunisia exhibit the highest index of illiteracy in the sample. The discrepancy in illiteracy rates with respect to Southern and Eastern European countries (and Malaysia) finds a plausible explanation in large per capita GDP differentials. However, in 1990 Tunisia and Thailand had very similar per capita GDP levels, but their illiteracy rates were respectively 35% and 7%. Likewise, in the same year, Morocco and the Philippines, despite very similar per capita incomes, showed illiteracy rates of 51% and 10%. In both cases, therefore, the discrepancy was substantial and has not narrowed since 1970. Morocco has the lowest rank in all the indicators. Eastern European countries' educational mastery is apparent, compared to all other countries. The Philippines ranks relatively high, compared to the overall level of development.

13/ The main secondary sources for years of schooling and educational attainments data are Barro-Lee (1993, Kyriacou (1991) and Psacharopoulos-Ariagada (1986). In turn, UNESCO Yearbooks are their main primary sources. Educational attainment data provide the share of people aged 25 and over, who enrolled, respectively, in the primary, the secondary and higher levels of schooling. Data on completion ratios are also available from the same data set. Illiteracy rates and enrollment ratios are from World Bank sources (World Development Report and World Tables).

Table 4.6: EDUCATIONAL ATTAINMENT INDICES

	Illiteracy Rate (1990) (1)	Primary Net Enrolment Ratios (1990) (2)	Secondary Enrolment Ratios (1990) (2)	Number of Years of Schooling (1985) (3)	Educational Attainment (1985) (4)	
					Secondary Level	Higher Level
Morocco	51	55	36	3.5	N.A.	N.A.
Tunisia	35	95	45	5.6	6.5	2.4
Spain	5	100	107	9.7	8.7	3.9
Portugal	15	99	59	6.5	6.1	2.1
Turkey	19	99	54	6.3	4.9	2.3
Poland	N.A.	97	82	N.A.	14.6	6.4
Czechoslovakia	N.A.	N.A.	84	N.A.	17.1	6.4
Malaysia	22	N.A.	58	5.7	11.9	1.7
Thailand	7	N.A.	32	5.5	3.2	4.9
Philippines	10	99	73	9.4	8.7	11.6

Notes: (1) Data published in the World Development Report.
(2) Data from the World Tables 1992. (% of age group enrolled).
(3) The index is based on the average number of years of schooling taken from Kyriacou (1991).
(4) The index is based on the share of people aged 25 and over who enrolled in the secondary school (or higher) for at least one year as reported in Barro-Lee (1991). Data for Morocco are missing.

4.26. **Infrastructure endowments.** Physical infrastructure is a necessary condition for productivity, growth and international competitiveness. Data on five types of infrastructures (telephones, electric power, roads, railways and aircraft) are shown in Table 4.7. In general, infrastructure endowment has been found to be strongly linked with per capita-GDP, population density, size and other geographical and locational factors. Compared with other countries in the sample, Morocco has a much poorer infrastructure endowment. Tunisia ranks poorly in power generating capacity and air traffic, while ranking in the middle as to telephones, roads and railways traffic. Telephone density (as a proxy for communication services) is highly correlated to the level of GDP per capita. Quite naturally, telephone density is far lower in Morocco and Tunisia than Spain. However, the gap between the indicator in Tunisia and those of the other countries in the sample has stayed roughly constant since 1970, while it widened for Morocco. Electrical power generating capacity depends strongly on past public investment policies. Not surprisingly previous socialist countries display the highest value of the indicator, followed by Spain and Portugal. Asian countries show, in general, a much lower capacity than European countries. Morocco and Tunisia show a worse indicator than Asian countries; however, they exhibit a railways endowment double than countries in the South-East Asia. Road density is lowest in Morocco, Thailand and Tunisia. Finally, Asian countries appear to be relatively well endowed with aircraft infrastructures, after Spain. Morocco and Tunisia are at the bottom of the ranking.

Table 4.7: INFRASTRUCTURE ENDOWMENTS

	Telephone Density (1) (1989)	Electrical Power Generating Capacity (2) (1990)	Railways Traffic (3) (1989)	Road Density (4) (1989-90)	Air Traffic (5) (1991) ('000)
Morocco	13.4	4.8	11.2	.08	19
Tunisia	33.4	9.7	11.2	.17	12
Spain	304.0	85.8	22.5	.78	263
Portugal	191.5	79.3	16.8	.64	47
Turkey	103.3	21.1	11.2	.46	33
Poland	82.1	98.8	35.4	1.16	20
Czechoslovakia	142.8	162.0	562.4	.66	20
Malaysia	79.0	14.6	56.2	.11	146
Thailand	21.3	19.4	56.2	.14	70
Philippines	91.2	22.7	--	.52	63

Notes: (1) No. of telephones per 1,000 inhabitants, published in the U.N. Statistical Yearbooks. Data for 1989 are reported in Italtel, Communications Atlas 1992.
(2) Raw data in thousand kilowatts per squared Km, reported in the U.N. Energy Statistics Yearbook.
(3) Railways traffic (measured as million tons-Kms per square Km), reported in U.N. Statistical Yearbooks.
(4) Road density data (Kms of total network per square Km), reported in the U.N. Statistical Yearbooks.
(5) Total number of departures (in thousand) of domestic and international flights from the country's airports.

F. CONCLUSIONS

4.27. This chapter has compared indicators of cost competitiveness and comparative advantages in Morocco, Tunisia and in a sample of countries that compete in the main destination market, Europe, and in the sectors that are most relevant to the two Maghreb countries.

4.28. The specialization pattern of Morocco and Tunisia evolved significantly during the last two decades and new comparative advantages were acquired in manufacturing products. However, some competitors, notably Turkey, Malaysia, Thailand, and, in recent years, the Eastern European countries, were even more successful. They managed not only to strengthen their traditional comparative advantages in labor-intensive products; but also to diversify their economies and specialize in new, technological and capital- intensive products.

4.29. Cheap labor has traditionally been the key determinant of the competitiveness of Moroccan and Tunisian exports. Real wages are still low, relative to competitors, and they have been declining in recent years. But productivity (measured by value added per employee) is also low, so that the level of unit labor costs is relatively high. By contrast, countries like Turkey,

the Philippines, Indonesia, Thailand and China have been able to combine low but increasing wages with a fast rise in productivity. The computation of labor costs in a common currency, the ECU, shows that during 1985 to 1990 both Morocco and Tunisia improved their price competitiveness against European competitors (Portugal, Greece, Hungary, Turkey); but failed to catch up with the increased strength of Asian competitors, China, Malaysia, Indonesia; countries that devalued their currencies much more than Morocco and Tunisia.

4.30. Energy and transportation costs are high in the two Maghreb countries, in particular in Morocco. They decrease the profitability of exports and therefore the incentive of producing tradables. The case for advocating lower energy taxes is particularly strong in Morocco, as the price of energy is higher than in all competitors.

4.31. Productivity growth is the challenge that Morocco and Tunisia will face in the future to improve competitiveness and the living standards of the population. International competitiveness requires the broadening of existing and the creation of new comparative advantages, which is a complex task. Previous chapters have already discussed the role of macroeconomic and exchange rate policies in providing an environment that is competitive, stimulates investments and the acquisition and internalization of technology.

4.32. Evidence from this chapter shows two important areas that need public intervention: human capital and infrastructure. Investments in these areas may significantly improve, in the long run, the productivity of labor and the growth path of the economy. A reduction in the illiteracy rate should be a priority in both countries, but especially in Morocco. A second priority would be the improvement in technical education and training. Most of this training could be actively designed and managed by the private sector itself, with minimum involvement from the State.

4.33. Significant public investments is required, especially in Morocco, to improve the quality of infrastructure services and expand the existing stock. Public investment may be insufficient, and complementary financing will be necessary. To this aim, private participation should be fostered by deregulating the provisions of these services, in particular in transport and communication; and by developing a framework for concession contracts with private investors.

CHAPTER V: TOWARDS A CLOSER ASSOCIATION WITH EUROPE

A. INTRODUCTION

5.01. The unification of the European market represents new opportunities and challenges to the Maghreb countries. The removal of internal barriers in Europe may accelerate economic growth, increase the demand for imports and facilitate the circulation of these products within national markets. On the other hand, it will also facilitate the creation of more competitive domestic suppliers, relative to those outside the community. The restructuring of European industries may also move some production outside the European Union (EU) to countries that are able to attract foreign investments. How these changes will affect Morocco and Tunisia largely depends on the content of the agreements that in the next few months will be re-negotiated with the EU.

5.02. The cooperation between the Maghreb countries (Morocco, Tunisia, Algeria) and the EU is currently governed by three Cooperation Agreements signed in 1976 and revised in 1982 and 1988 by Protocols to accommodate the accession of Greece, Spain and Portugal. Some of the benefits that derive from these arrangements, such as the preferential access to the European market, were diluted significantly after six Eastern European countries signed their own Association Agreements with the EU in 1991. Following their example, Morocco and Tunisia applied to upgrade the existing arrangements with the EU into full free-trade agreements. In response, the Commission of the European Union proposed, in early 1992, the negotiation of a so-called Euro-Maghreb association agreement[1] that would include: the institutionalization of political dialogue between the EU and Morocco and Tunisia; reciprocal free trade in industrial products; reciprocal liberalization of trade in agriculture and services; and expansion of the scope of technical, economic, social, cultural and financial cooperation. A commitment to respect human rights and to adhere to democratic principles would also be a key element of the agreement.

5.03. What is to be gained by Morocco and Tunisia from such a proposal and what can they learn from the recent negotiating experience of the Eastern European countries? These are the questions investigated in this Chapter. Section B reviews the content of the existing

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1/ There are three "basic" types of economic agreements that the EU may conclude with non-member countries: cooperation, free trade, and association agreements. Cooperation agreements tend to be non-reciprocal and largely limited to the granting of preferential access for industrial products to EU markets. Free trade agreements are reciprocal, but are largely limited to trade in industrial products. The Union has concluded such agreements with the EFTA countries (1973) and with Israel (1975). Association agreements also imply reciprocal trade liberalization, but cover in addition : labor mobility, capital mobility (including establishment or foreign direct investment), and freedom of supply of services (i.e., cross-border trade in services).

cooperation agreements with the EU. Section C provides some indications of the costs and benefits to Morocco and Tunisia of different agriculture trade arrangements with the EU. Finally, Section D summarizes the main elements of the agreements concluded by the EU with the East European countries and identifies some of the implications for Morocco and Tunisia of signing analogous agreements.

B. THE EXISTING COOPERATION AGREEMENTS

5.04. **The 1976 Agreement**[2] provided the three Maghreb countries (Morocco, Tunisia and Algeria) with quota and tariff free access into the European market for their industrial products.[3] The exception to this arrangement was a system of voluntary restraints or quotas, on specified items of textile and clothing. Fewer quotas, and less restrictive, were applied to export items produced with raw materials originating from Europe. The Agreement also provided preferential treatment to agricultural exports under the EU Common Agricultural Policy (CAP). The CAP maintains EU prices above world prices through minimum entry or reference prices, a variable import levy equal to the difference between the EU and world prices, customs duties, and quantitative restrictions in some cases. The Maghreb countries are granted entry of agricultural products with significant reductions in tariffs (between 20% and 100%). However, the tariff reductions only apply to a given quota (the so-called "tariff quota"), beyond which exports to the EU are subject to higher tariffs. In addition, these exports are subject to seasonal restrictions to protect EU producers. Finally, Maghreb producers are also obliged to sell at the EU reference prices. Although this limits their capability to compete through prices, their profits are enhanced as reference prices are much higher than supply prices.

5.05. Following the accession of Spain and Portugal to the EU, and the resulting fears of the Maghreb countries for the disruption of their agricultural exports, the 1976 Agreement was amended by a **1988 Protocol**[4] which included: the phasing out of customs duties on agricultural products within the tariff quotas by 1996 (the same timetable that applied to Spain and Portugal); an enlargement of the quotas; and a new agreement for gradually reduced duties on agricultural products that previously had not been considered in the 1976 Agreement.

5.06. The 1988 Protocol succeeded in preserving and enhancing existing benefits and the export patterns of the Maghreb countries. Most importantly, their industrial products were

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2/ This section draws from Alan Roe (1992), "The Maghreb Countries: Strategies for Closer European Community Association"; and Alan Roe (1993), "The Maghreb Countries: Further Aspects of Closer European Community Association"; MN1 unpublished papers.

3/ European firms exporting to the Maghreb were just granted most-favored nation treatment.

4/ The loss of benefits that derived from the accession of Greece to the EU was taken into account in the 1982 Protocol.

shielded from the competition against Asian countries whose access to the EU market was much more restricted. The almost free access of industrial products, and the preferential treatment granted to agricultural products represented a most important determinant of the strong performance of Maghreb exports in the 1980s. There is also evidence that voluntary export restrictions have rarely been binding. For example, Morocco's dollar earnings at the end of the 1980s were four times larger than a decade earlier, when these quotas were introduced. Between 1985-88 and 1989-91, exports to the EU of major fruits and vegetables grew by 50% in Morocco and by 88% in Tunisia. This was probably due to increased sales beyond the quota levels. In recent years agricultural exports from the two countries have systematically exceeded the EU quota.

The need for a change

5.07. Several reasons explain the need felt by Morocco and Tunisia to redefine the extent of their cooperation with the EU: first, the EU is imposing common industrial, environment and safety standards, and a system of certification and compliance to enforce these standards to all member countries. Products that enter the European market will be increasingly asked to meet these standards; achieving full conformity with the new EU regulations will be easier with the full cooperation of the EU in these areas; this could be made possible by the inclusion, in the agreement to be negotiated, of technical and financial assistance by the EU. Second, the scope of the recent agreements concluded between the EU and some Eastern European countries (the so-called "Europe-Agreements") as well as the one with Turkey (which should lead to a customs union in 1995) go much further than those signed with the Maghreb countries. The Europe agreements provide for duty and non tariff barrier free access to the EU for all industrial products (including textile and steel) within ten years and a greater access for agricultural products. They go beyond simply accepting the principle of free trade by including arrangements on competition policy, subsidies, foreign investment, intellectual property rights and a commitment to harmonize the economic legislation with that of the EU. The possibility of eventually achieving full membership with the EU for many East European countries may also result in significant trade diversion away from the Maghreb. Third, the benefits of a closer cooperation with Europe may be larger, in the long run, than any of the adjustment costs to be suffered in the short run.

5.08. Estimates of the benefits and costs from an enlargement of the existing Association Agreements between the EU and the Maghreb largely depends on the specific details of such agreements and on the transition period allowed before implementation. Recent research indicates that the main costs arise, in both countries, from the loss of jobs in the industrial sector, as tariffs are reduced. The main benefits would come from increased export level, enhanced levels of foreign investment and from the efficient working of a liberalized economy.

C. AGRICULTURAL TRADE ARRANGEMENTS WITH THE EU: SIMULATIONS OF COSTS AND BENEFITS

5.09. This section provides some indications of potential costs and benefits that would arise under different agricultural trade arrangements between Morocco and Tunisia (MT) and the EU. Three alternative simulations are carried out :

(a) MT have no preferential access for their agricultural exports to the EU. The price received for their exports is then the world price and not the higher EU price. This scenario is clearly not part of the negotiating agenda; it is analyzed just to give a rough estimate of the "price rents" currently received by MT because of the privileged access to the European market granted in the 1976 Associations Agreements and the subsequent Protocols.

(b) A free trade agreement with the EU. Under this scenario MT would receive duty-free access to all their exports, including agricultural products, but they would also have to pay the higher EU prices on their imports from the EU.

(c) The effect of the recent GATT Uruguay Round. The EU agreed to partially liberalize the CAP, which is expected to lead to a moderate increase in the world price of some major agricultural products. It is assumed that this will not concern the products currently exported by MT.

5.10. The structure of agricultural trade in both Morocco and Tunisia is shown in Tables 4-6 of Annex I. The simulations consider only the major export items for both countries,[5] with the exception of olive oil for Tunisia. This is because there is a large variation in the quality, and therefore in the price, of the oil sold in different EU countries. Thus, the average EU price may differ from the ROW price because of differences in quality and not because of EU agricultural policies.

5.11. The simulations consider only short run effects, and therefore take quantities produced, exported and imported as given. Neither long term effects nor policy responses to the different scenarios are analyzed. Moreover, they take into account only a small percentage of exports; thus, caution should be taken in interpreting the results, which are reported in Table V.1.

5/ The data used in the simulations are export, import and unit values of products from MT to the EU and to the rest of the world. All data are from Comtrade, and are taken as averages for 1985-1992. Products considered for Morocco are SITIC categories 031 (fresh fish), 032 (fish prepar.), 0541 (fresh potatoes), 05712 (fresh mandarins), 0577 (edible nuts), 058 (fruits preserv.). These categories represent about 45% of total agricultural exports to the world. Products considered for Tunisia are SITIC categories 037 (fish prepar.), 048 (cereals and prep.), 052 (dried fruit), 0541 (fresh potatoes), 0546 (veget. simply prep.), 056 (veget. preserv.), 062 (sugar candy); they represent about 38.5% of total agricultural exports (excluding olive oil) to the world.

Table 5.1: COST/BENEFIT SIMULATIONS OF EU POLICY SCENARIOS (1985-92 average, percent)

Simulation	Morocco*		Tunisia*	
1 - Removing preferential EU access	-21.8	-12.0	-15.1%	-10.6%
2 - Free Trade Agreement (FTA)	17.7	9.8	-49.7	-34.9
3 - Uruguay Round	-6.2	-3.4	-11.3	-7.9

* The first column for each country indicates the loss (or benefit) as a percent of the value of agricultural exports to the EU. The second column indicates the loss as a percent of the value of agricultural exports to rest of the world.

5.12. **No preferential access to the EU.** According to this hypothesis MT receive the low world price rather than the higher EU price for their exports to the EU. The difference between the EU and the rest of the world (ROW) prices is multiplied by the value of exports to the EU to calculate the potential loss. As Table V.1 shows, the potential loss that would arise to MT from no preferential access to the EU (or, equivalently, the rent that is being enjoyed from such access) would be substantial, 21% and 15% of the value of agricultural exports to the EU in the two countries respectively.[6]

5.13. **Free trade agreement.** The scenario of a free trade agreement with the EU implies that all restraints on MT agricultural exports to the EU are eliminated; MT would then redirect all their exports to the EU but would also have to import from the EU at the higher prices.[7] The net effect would be positive for Morocco and negative for Tunisia.[8] Why? The gains are on the products previously sold to the ROW that could now be exported to the EU at

6/ For Morocco, the loss would be equal to 5.1% and 3.1% of merchandise exports to the EU and to the ROW respectively; or 0.42% of average GDP. The equivalent values for Tunisia would be 1.4%, 1.1% and 0.27%.

7/ The EU import prices have been calculated by applying to selected imports the following nominal protection rates: 0.98 for beef, veal and sheep; 1.89 for dairy; 0.65 for wheat; 1.14 for rice; 0.91 for coarse grains; 1.18 for sugar and zero for oils. See Brandao A. and Martin W. (1993) "Implications of Agricultural Trade Liberalization for the Developing Countries" in Agricultural Economics, Vol. 8.

8/ An important issue which has not been included in the calculations of Table V.1 is that of trade creation and diversion. Under a free-trade agreement, the optimal policy for both MT would be to sell as much as possible to the EU because prices are high and import as much as possible from the ROW. However, if MT apply import tariffs which are higher than those of the EU, importers will face EU prices which are lower than tariff-inclusive ROW prices, and they will choose to import from the EU. This will result in significant losses for both MT.

EU prices. The losses are on the products that would be imported from the EU, at the higher EU price rather than the world price. Contrary to Morocco, Tunisia has a higher share of its exports that already go to Europe, so the potential gains are relatively minor. In addition, if the current structure of high nominal protection is maintained against the ROW, it might still be convenient to import from Europe, although European prices are higher than world prices.[9]

5.14. **Uruguay round.** The partial liberalization of the CAP agreed under the recent Uruguay Round will lead to an increase in the price of some agricultural products[10] which in turn will increase the cost of imports for MT. Thus, both countries will experience some losses.[11]

5.15. In spite of their obvious simplification, the simulations reported in Table V.1 show that Morocco and Tunisia have benefitted from the preferential access granted by the EU to their agricultural products in the EU. A free trade agreement with the EU may or may not benefit the two countries. The possibility of reaching a free trade agreement calls for lower MT tariffs to the ROW. In fact, with high tariffs importers will buy from the EU when ROW prices (not inclusive of tariffs) are lower. Such trade diversion can turn out to be very costly for the two Maghreb countries.

D. THE EUROPE-AGREEMENTS AS A MODEL FOR MOROCCO AND TUNISIA: ISSUES AND OPTIONS

5.16. The Maghreb countries have set a broad negotiating agenda, ranging from free trade in agricultural and industrial products, free movement of labor and enhanced financial cooperation. But how much of this agenda can be effectively achieved? The experience of the

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9/ For Morocco, the gain would represent 4.1% and 2.6% of merchandise exports to the EU and to the ROW, or 0.34% of GDP; for Tunisia, the loss would represent 4.94% and 3.75% of merchandise exports to the EU and to the ROW; and 0.94% of GDP.

10/ Many studies have estimated the effect of the Uruguay Round on agricultural prices and trade. These are summarized in Valdes A. and Zietz J. "Price Distortions in World Food Markets: Quantitative Evidence", Technical Department, LAC, World Bank, August 1993. The effect of the Uruguay Round on world prices used for our simulation are: wheat, 6.3%; coarse grains, 4.4%; rice, 4.2%; sugar, 10.2%; soy oil, 3.8%; milk, 10.1%; butter, 6.9% and cheese, 36.2%. These values are taken from Brandas and Martin (1993) op. cit..

11/ The loss for Morocco would represent 1.4% and 0.9% of merchandise exports to the EU and to the ROW; and 0.12% of GDP. For Tunisia, the equivalent values would be 1.1%, 0.8% and 0.2%. These results should be interpreted with caution. They may overstate the impact of higher food import prices because food imports, due to the drought, were very high in recent years, especially in Morocco; while the impact of improved market access for agricultural products and the dynamic effects of trade liberalization are not included.

Eastern countries is illuminating. The Europe Agreements (reported in Box V.1) were not easily negotiated. Eastern European countries were unable to achieve free market access for their agricultural products because the budgetary consequences of extending the existing price support system of the CAP would have been too large for the EU. Freedom of movement for services and full capital freedom were included as long-term goals. Free movement of workers, strongly advocated by the Eastern Europeans, was kept off the agenda, not being even a long-run objective. The next paragraphs discuss some of the issues and policy options that will be confronted by Morocco and Tunisia in their negotiations with the EU.

5.17. **Preferential versus nondiscriminatory trade liberalization.** A customs union with the EU, instead of a free-trade agreement, would have the advantage of liberalizing trade (although not so much agricultural trade) against the rest of the world, thus reducing the trade diversion that would occur from a preferential liberalization vis-à-vis the EU. In fact, preferential liberalization is inherently associated with some degree of trade diversion. Even though the EU is by far the largest trading partner of the Maghreb countries, the costs of trade diversion resulting from an Association Agreement are likely to be high. A recent study concluded that the welfare benefits of trade liberalization by Morocco almost double if such liberalization applies to all potential trading partners and not just to the EU.[12] On the other hand, the costs associated with such global liberalization are not significantly higher than those that would result from free trade with just the EU: in fact inefficient sectoral adjustments (i.e., the trade diversion) does not occur if liberalization is nondiscriminatory.

5.18. The objective of a Euro-Maghreb Agreement is, however, a free-trade agreement, not a customs union. Even if the latter is not under negotiation, the unilateral pursuit of a trade policy stance that implies the adoption of something analogous to a customs union would be beneficial to the Moroccan and Tunisian economies. Such a unilateral policy would also have the important benefit of avoiding the costs of adopting all of the EU's common commercial policy (such as the EU-wide safeguards, antidumping, and related import restraints). A free-trade agreement with the EU accompanied by substantial lowering of trade barriers against third parties could prove to be more beneficial than just the pursuit of a customs union. A practical corollary of this recommendation is that barriers against non-EU partner countries should be reduced according to the same timetable as tariffs and other barriers against imports from the EU.

5.19. A possible undesirable effect of an exclusive Maghreb-EU agreement would be to create forces *against* inward foreign direct investment by EU firms. This is because the EU has concluded or will conclude many bilateral free-trade agreements with different partner countries. Given that EU-based firms have free access to all partners' markets, they have an incentive to stay (or to re-locate) in the EU if the costs of production and transport are lower

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12/ Rutherford, Thomas, E. Rutstrom and David Tarr (1993). "Morocco's Free Trade Agreement with the EU: A Quantitative Assessment", World Bank PPR Discussion Paper.

than elsewhere.[13] The extent to which investment diversion will occur greatly depends on the attractiveness of Morocco and Tunisia as production platforms. This, in turn, depends on the regulatory environment and the efficiency of infrastructure and support services, as well as relative wages. To limit investment diversion, *partner countries should therefore negotiate free trade agreements with one another*. Thus, a Euro-Maghreb agreement should explicitly allow for the negotiation of free trade agreements with other partners than the EU.

5.20. **Industrial products.** As the experience of the recent Europe Agreements has shown (see Box V.1) not much should be expected from the EU in terms of significant immediate improvement in market access. The recent Uruguay Round negotiations have indicated that quantitative import restrictions on textiles and clothing will be eliminated and substituted by tariffs in about ten years. Morocco and Tunisia should then try to obtain immediate duty free access to the EU for the products that are currently constrained by the "voluntary export restraints".

5.21. **Agricultural products.** The Europe Agreements show that trying to obtain improved market access for agricultural products is likely to run into strong opposition by vested interests in the EU. The concessions that might be granted will be highly dependent on what happens to the CAP. Currently, the reductions in trade barriers that the EU concedes are mostly in the form of levy reductions. Following the recent Uruguay Round Agreement, levies will have to be decreased and non-tariff barriers eventually eliminated. Maghreb countries should therefore focus the negotiations on the elimination, or at least an enlargement, of their quotas for their agricultural products in the very near future.

5.22. **Services.** The main potential benefits that may derive from a Euro-Maghreb agreement with the EU may come from the reduction in barriers to imports in service sectors (e.g., telecommunications, transportation, insurance, banking, financial and legal consultancy, data processing, etc.). The lack of attention given to services in the Europe Agreements is mostly a reflection of the weakness of services, and their regulatory framework, in the Central and East European countries. This is not the case in the Maghreb countries: because of historical links, similarities in training and education, and the advantage of the proximity to Europe, substantial advantages may derive from pursuing free trade in specific services. For example, the liberalization of maritime transport, and possibly air and inland transport, would lower transportation costs and significantly increase the cost competitiveness of Moroccan and Tunisian exports.

5.23. **Liberalization of capital flows.** Obligations regarding freedom of capital movement are significant in the Europe Agreements, but are limited to current account transactions and financial flows related to establishment. Liberalization of capital account transactions is a longer-term objective for which no time period was established. The Maghreb countries may have to provide a more explicit commitment towards establishing capital account

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13/ That is, the lowering or elimination of tariffs will eliminate the incentive for EU firms to locate in any particular country in order to sell in that market.

liberalization within a given time frame, as current account convertibility has already been achieved.

5.24. **Right of establishment.** Central and East European countries agreed to allow establishment by EU-based firms in virtually all sectors of economic activity. Although transitional arrangements and temporary exceptions were negotiated, the number of sectors excluded indefinitely were very limited (largely restricted to agricultural land, natural resources and historical monuments). Morocco and Tunisia should and are in fact adopting a similar strategy. This is because in many sectors - both tradable and non-tradable (services) - establishment is the most direct method of enhancing competition and efficiency, subject to the existence of appropriate regulatory structures.

5.25. **Harmonization of laws.** The Europe Agreements devote much attention to the approximation of laws and the implementation of EU competition policy disciplines. Similar provisions, likely to be included in a Maghreb agreement, will have major implications for Morocco and Tunisia. They might include the adoption of more stringent industrial standards and certification rules, to fully conform to EU regulations, and the mutual recognition of certification and testing procedures.

5.26. Approximation of laws is important not just in terms of facilitating exports to the EU, but also in terms of establishing a regulatory environment that is more conducive to competition. An agreement with the EU will probably require only the adoption of a principle of "non-discrimination" or national treatment, that is the obligation not to discriminate between foreign and domestic firms. But national treatment will often not be sufficient to ensure that Morocco and Tunisia are attractive for foreign direct investment. Similarly, if markets are not competitive, domestic firms may not benefit from the presence of European firms. Thus, the Maghreb countries should aim at harmonizing both the legal frameworks and the institutional arrangements regarding competition with those of the EU.

5.27. The **rules of origin** that are maintained by the EU in the context of the Euro-Maghreb agreement will have an impact on both trade and investment diversion incentives. The EU tends to apply the same rules of origin to the countries with which it has cooperation or association agreements. However, Morocco and Tunisia may seek to obtain more generous rules regarding cumulation for origin determination purposes. This is one concrete reason why the pursuit of intra-Maghreb liberalization would be beneficial, as it would allow each Maghreb country to argue that for rules of origin purposes, the region should be treated as a whole. More generally, an attempt should be made to argue that goods originating in the Central and East European and EFTA countries, as well as the Mediterranean countries with which the EU has negotiated trade agreements (especially Turkey, Israel, Tunisia, and Egypt) should also be included in those towards which cumulative origin criteria apply.

5.28. **Transition periods.** The Europe Agreements (see Box V.1) have ten-year transition periods, with Central and East European countries offering immediate duty-free access to their markets for a substantial part of their manufacturing sector. Would Morocco and

Tunisia be willing to offer such immediate access, or will they want to liberalize more gradually? Although a gradual approach may be less painful, the phase-in period for lowering tariffs should not be longer than five years. Trade may simply move eastwards unless Maghreb countries can match the liberalization moves of the Eastern European countries. Moreover, it is important that transitional protection be transparent, that all industries concerned be aware of the liberalization schedule negotiated with the EU, and that the government pursue policies that facilitate the restructuring or exit of firms and industries facing large adjustment needs.

5.29. Finally, the cooperation between the Maghreb countries and the EU should also extend to education and training, research and development and cultural matters. It should also provide for regular political dialogue of a consultative nature.

BOX V.1

THE EUROPE AGREEMENTS WITH THE CENTRAL AND EASTERN EUROPEAN COUNTRIES

The European Union has negotiated and signed association agreements called "Europe Agreements" with Czechoslovakia, Hungary, and Poland in 1991 and with Romania and Bulgaria in February and March 1993. Following the creation of the Czech and Slovak Republics the original agreement with Czechoslovakia will be applied as two separate agreements.[1]

The agreements are unlimited in duration, and are to be implemented over a ten-year period, in two stages of five years each. A three-year transitional period is foreseen for the implementation of certain measures, e.g., the adoption of EU competition rules and principles. The agreements consist of four main elements: (1) free movement of goods; (2) movement of workers, establishment, and supply of services; (3) payments, capital, competition and approximation of laws; and (4) economic and financial cooperation.

(i) Free Movement of Goods

The objective of the Agreements is free trade in industrial products, not a customs union. Thus, the Central and East European countries will not adopt the EU's common commercial policy. The EU accepted asymmetry in that reductions in its tariffs and trade barriers will be implemented more rapidly than liberalization by these countries (which will apply transition schedules from three to ten years). Upon entry into force of the interim agreements, the EU has abolished tariffs on "non-sensitive" industrial products. Duties on "sensitive" products are to be reduced gradually over two to four years, depending on the product. All QRs are to be eliminated by end-2000, and are to be increased by 10 percent per year during the transition period.

Textiles. QRs on imports of textiles and clothing and quotas for outward-processing traffic were expanded by over 60% relative to the 1991 MFA quota limits, and the number of restrained categories reduced. Quota and duty-free trade in textiles and clothing is to become effective after a transition period of five years, that is, on January 1, 1997.

Agriculture. The concessions granted by the EU are similar to those in the Lomé Convention and the Mediterranean cooperation agreements. The most frequent formula is a 60% reduction of variable levies and tariffs, phased-in with three annual steps of 20% each (e.g., for beef, poultry, lamb, pork and dairy products). For fruits and vegetables, duty or levy reductions of some 30% to 50% will be phased-in over a period of five years. Duty free quotas will expand by one-third to one-half by January 1996.

Contingent protection The Europe agreements contain several articles of safeguard that allow actions to be taken if imports from Central and East European partner countries cause or threaten serious injury to EU producers. The agreements also allow for antidumping actions to be taken, consistent with GATT obligations, as well as actions to safeguard public health, safety and morals, and the balance of payments. However, they should not affect transfers related to foreign direct investment from the EU or repatriation of dividends. Central and East European countries may temporarily protect infant industries or sectors under economic restructuring, subject to a number of conditions (tariffs are not to exceed 25%, EU producers are to be given a margin of preference, quotas are not to exceed 15% of the total industrial imports from the EU, and actions may only be taken within three years of liberalization of market access and are not to last more than five years).

Rules of origin. The usual set of origin rules for countries with preferential trading arrangements with the EU apply. Thus, a product is normally considered "domestic" if processing of foreign inputs is sufficient to lead to a change in the four-digit tariff heading and/or if a local content (value added) threshold is satisfied. In many cases the local content requirement is 60%. Cumulation is not allowed. Thus, content requirements do not apply to the Central and East European countries as a group, but to each individual country.

1/ Since each Europe Agreement must be ratified by 13 national parliaments plus the European Parliament--because the agreements are 'mixed', i.e., include issues on which the Commission does not have exclusive competence -- interim treaties were signed that entered into force on March 1, 1992 for the so-called Visegrad four (Hungary, Poland, and the Czech and Slovak Republics) and July 1, 1993 for Romania. This ensured that tariff reductions could commence before ratification of the agreements. As of end-October 1993 only the agreements with Poland and Hungary have been ratified.

BOX V.1 (Cont'd)

THE EUROPE AGREEMENTS WITH THE CENTRAL AND EASTERN EUROPEAN COUNTRIES (Cont'd)

(ii) Movement of Workers, Establishment, and Supply of Services

Movement of workers. Very little has been agreed in terms of liberalizing movement of workers. The main EU-wide commitment is to allow the same benefits of European citizens to legally resident Central and East European workers, their spouses and children.

Establishment and capital mobility. Free entry and national treatment was granted to all firms from the associated countries, except in air and inland water transport and maritime cabotage. The associated countries will also grant free entry and national treatment to EU firms, but have been allowed phase-in periods for certain sectors or activities. The modalities and content of these exceptions differ across Central and East European countries. The Europe Agreements also require free mobility of capital and unrestricted repatriation of profits of firms that establish in partner countries. Full convertibility and liberalization of capital account transactions are longer-term objectives, although no time frame is mentioned for their realization.

Supply of services. Cross-border supply of services is to be liberalized progressively (although no time frame is established), taking into account the development of the service sector in Central and East European countries.

(iii) Competition Policy and Approximation of Laws

Competition policy. The basic competition rules of the EU are to be introduced in the associated countries, in particular with respect to collusive behavior, abuse of dominant position, public undertakings and competition-distorting state aid (Articles 85, 86, 90 and 92 of the EEU Treaty). Implementing rules are to be adopted by the Association Council within three years. Until then, GATT rules with respect to countervailing of subsidies will apply. State-aid, compatible with EU rules for disadvantaged regions (Article 92.3(a) Treaty of Rome), can be applied to the entire territories of the associated states during the first five years.

Intellectual property rights. The associated countries will introduce laws to protect intellectual, industrial and commercial property rights, equivalent to those prevailing in the EU, by the end of the first stage of the transition period (five years). They are also to accede by that time to the 1978 Munich Convention on the grant of European patents and the multilateral conventions on intellectual, industrial and commercial property rights.

Public procurement. Companies from the associated states will be able to participate in public procurement in the EU on the same terms as EU firms at the time of entry into force of the Association Agreements.

Approximation of laws. The associated countries shall endeavor to harmonize their legal systems gradually with EU laws to foster further integration. This applies, in particular, to customs, company, and banking law, accounting and corporate tax laws, intellectual property rights, workers' safety, financial services, competition policy, consumer protection, indirect taxation, plant and animal health standards, food legislation, and other technical, safety and environmental standards. The EU will provide extensive technical assistance.

(iv) Economic, Financial and Political Cooperation

The Europe Agreements make provisions for substantial technical and financial assistance but do not contain any specific number or new commitments on the part of the EU. The absence of a 'financial protocol' is noteworthy. Provisions are also made for temporary financial assistance to support Central and East European currencies, balance of payments, and medium-term stabilization and economic restructuring. Such funds are conditional upon an IMF program.

ANNEX I

STATISTICAL TABLES

Table 1: Morocco - Balance of payment (millions of US dollars)

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Exports of GNFS	3272.5	3184.9	3615.8	4234.3	5474.3	5038.2	6306.2	6116.9	6414.8	6494.6
- Merchandise (fob)	2414.5	2145	2410.5	2781.5	3608.9	3312.9	4210.4	4277.7	3977.4	3888.3
- Manufactured	381.2	474.1	649.8	870.7	974.6	1124.4	1517.8	1566.7	1543.9	1608.7
- Non factor services	858.1	1039.9	1205.3	1452.9	1865.4	1725.3	2095.7	1839.3	2437.3	2606.3
- of which Tourism	453.4	606.2	739.2	933.1	1101.8	1014.9	1279.8	1013.2	1371	
Imports of GNFS	5247.3	4341.4	4691.9	5062.5	5575.6	6287.4	7850	7689.8	8228.5	8307.6
- Merchandise (fob)	3769.7	3513	3476.9	3850.1	4359.9	4991.5	6281.6	6252.8	6693.9	6705.9
- Non factor services	963.5	480.7	870.7	830.2	782.1	798.7	941.6	817.6	872.6	935.7
Resource balance	-1974.7	-1156.5	-1076	-828	-101.4	-1249.2	-1543.8	-1572.9	-1813.7	-1813
Net factor income	-562.1	-765.7	-688.5	-766.7	-1036.8	-1159.4	-985.3	-1115.4	-1055.8	-1153.3
- total interest payments	736	688	806	759	957	1177	955	1130	995	1143.1
Net current transfers	1116.4	1063.5	1549.1	1758.8	1595.8	1602.7	2320.4	2270.2	2402.7	2388.9
- workers remittance	1053.7	967.2	1398.3	1587.2	1303.5	1336.5	2006.4	1990.1	2165.3	2273.6
Curr.acc.bal.IMF def.	-1323	-558.7	-199	163.9	547.5	-805.9	551.2	155	-466.8	-532.4
Long term cap. inflows	1330.8	637.9	832	927.7	858.6	766.3	891.2	963.5	1243.3	900.7
- Direct foreign investment	142.8	54.9	89	111.7	128.6	226.3	227.2	375.5	503.3	480
- Net long term borrowing	1188	583	743	816	730	540	664	588	740	375.7
Changes in net reserves	249.2	-18.6	-366.8	-287.9	-280.7	-73.8	-1797	-953.2	-559.6	-323.2
- Net credit from IMF	190.1	54.2	-312.6	-137.9	-104.8	-82.7	-162.4	-171.6	-116.1	-152
- Reserve change n.e.i.	59.1	-72.8	-54.2	-150	-175.8	8.9	-1634.6	-781.6	-443.5	-171.2
- Gross reserves (incl.gold)	814	345.2	486.2	751.8	835.8	770.3	2337	3348.9	3818.6	3989.8

Table 1: Tunisia - Balance of payment (millions of US dollars)										
	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Exports of GNFS	3517.5	2699.9	2721.9	3376.9	4242.2	4480.9	5190.8	5112.2	5990.3	5993.5
- Merchandise (fob)	2395.1	1729.2	1768.0	2136.6	2396.2	2930.6	3516.6	3709.6	4034.5	3995.7
- Manufactured	905	877	1175	1431	1785	2117	2621	2791	3123	3250
- Non factor services	1122.5	970.8	953.9	1240.3	1846.0	1550.3	1674.5	1402.6	1957.6	1997.8
- of which Tourism	682.7	498.5	485.9	686.5	1266.2	927.7	942.5	683.5	1068.5	1075.9
Imports of GNFS	3986.4	3207.1	3364.0	3472.8	4205.9	4814.2	5985.8	5655.6	6794.9	6641.1
- Merchandise (fob)	3453.3	2557.2	2750.5	2824.4	3443.9	4137.6	5193.0	4894.5	5895.7	5738.6
- Non factor services	533.1	649.9	613.5	648.4	761.9	676.6	792.8	761.1	899.2	902.5
Resource balance	-468.9	-507.1	-642.1	-95.9	36.4	-333.3	-794.7	-543.5	-801.9	-647.5
Net factor income	-293.3	-351.7	-421.7	-486.1	-497.8	-470.0	-509.8	-605.9	-666.2	-566.4
- total interest payments	255.0	270.9	327.0	376.6	413.0	431.3	448.6	443.6	483.6	513.8
Net current transfers	348.1	270.2	358.8	483.5	557.9	493.2	625.9	573.7	626.4	616.2
- workers remittances	303.2	270.6	361.6	486.3	543.9	487.7	598.5	569.9	577.9	577.9
Curr.acc.balance	-414.1	-588.6	-704.9	-98.5	98.5	-331.5	-660.6	-579.0	-743.1	-597.7
Long term cap. inflows	588.4	459.0	452.4	102.5	363.7	323.8	373.0	548.9	569.4	771.9
- Direct foreign investment	236.0	139.5	155.0	92.3	110.2	144.2	185.2	165.8	186.0	219.4
- Net long term borrowing (DRS	342.3	295.0	293.4	34.5	244.3	189.5	194.8	388.1	503.5	552.5
Changes in net reserves	-64.9	112.6	192.3	-116.4	-378.3	-97.2	83.0	102.7	-82.0	-100.0
- Net credit from IMF	-31.2	0.0	175.7	53.0	20.2	0.0	-111.3	77.1	43.6	-5.2
- Reserve change n.e.i.	-33.7	112.6	16.6	-169.5	-398.5	-97.2	194.3	25.6	-125.6	-94.8
- Gross reserves (incl.gold)	700.4	293.8	378.4	616.0	976.0	1036.9	866.8	865.9	912.9	1012.8

Table 2: Morocco - External sector indicators										
	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Merchandise export volume ($)	2414.5	2904.4	3015.4	3325.8	3947.2	3451.2	4191.3	4245.6	3976.2	4076.8
Manufactured exp. volume (1980 $)	381.2	618	709.1	903.2	940.8	1108.5	1378.9	1406.4	1287.9	1335.4
Imports volume (1980 $)	3769.7	4188.8	4308.3	4769.4	5237.5	5640.4	6357.1	6564.6	7120.2	6763.7
Merch. terms of trade	100	88.1	99.1	104.2	109.8	108.5	101.7	105.8	106.4	105
Real effective exchange rate (IMF)	100	74.6	71.3	68.9	67.5	67.7	64.4	64.4	65	61.2
Merch. export/GDP	12.83	16.67	14.18	14.84	16.26	14.50	16.23	15.41	14.00	14.45
Trade balance/GDP	-9.9	13.3	8.3	-7.7	-5.3	-9.5	-10.4	-9.3	-11.9	-12.9
Curr.acc.balance/GDP	-7.03	-4.34	-1.17	0.87	2.47	-3.53	2.12	0.56	-1.64	-1.98
External debt/GDP	51.6	127.2	104.3	109.5	93.9	93.9	89.7	75.7	74.2	79.8
Debt service/GDP	7.5	10.7	10.7	9.3	7.9	9.2	6.8	7.7	7.3	10.1
Gross international reserves (in months of imports)	1.7	0.8	1.1	1.5	1.5	1.2	3.1	4.5	4.8	4.9
(Export*-Import*)/GDP *GNFS	-10.49	-8.99	-6.33	-4.42	-0.46	-5.47	-5.95	-5.67	-6.39	-6.74
Share of manufactured exports to EU	58.88	53.86	55.06	60.71	55.43	68.61	65.34	61.69	65.16	

Table 2: Tunisia - External sector indicators

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993
Merchandise export volume (1980 $)	2395	2350	2625	2779	2970	3564	3613	3720	3944	4006
Manufactured exp. volume (1980 $)	905	1233	1394	1588	1811	2154	2380	2461	2557	2685
Merchandise imports volume	3453	3246	3347	3182	4528	5264	5703	4998	5395	5731
Merch. terms of trade	100.0	93.4	82.0	86.6	87.2	87.3	89.7	90.3	86.9	89.1
Real effective exchange rate	100.0	95.1	81.6	69.6	67.7	67.8	66.0	66.6	68.0	67.0
Merch. export/GDP	27.4	20.9	20.0	22.1	23.7	28.8	28.1	28.1	25.5	26.4
Trade balance/GDP	-12.1	-10.0	-11.1	-7.1	-10.3	-11.9	-13.4	-9.0	-11.8	-11.6
Curr.acc.balance/GDP	-4.7	-7.1	-8.0	-1.0	1.0	-3.1	-5.4	-4.4	-5.2	-4.0
External debt/GDP	40.3	59.0	67.2	70.6	67.2	68.5	61.9	63.0	53.6	58.6
Debt service/GDP	6.4	9.8	12.1	8.5	9.9	8.9	10.5	10.8	8.2	9.5
Gross international reserves (in months of imports)	2.1	1.1	1.4	2.1	2.8	2.6	1.7	1.8	1.6	1.3
(Export*-Import*)/GDP *GNFS	-5.4	-6.1	-7.3	-1.0	0.4	-3.3	-6.4	-4.1	-5.1	-4.3
Share of manufactures to EU	76.89	69.68	67.26	73.04	69.88	69.68	73.26	74.70	76.44	

Table 3: MOROCCO - Structure of merchandise exports (at current prices, in percentage)

Commodity	1980	1985	1986	1987	1988	1989	1990	1991	1992
AGRICULTURE	19.6	18.1	21.8	20.5	18.5	17.5	16.8	20.1	18.6
AGRO-INDUSTR. PRODUCTS	8.8	7.8	8.2	7.1	7.0	8.6	9.4	8.5	8.5
MINERALS EXCL. FUELS	41.2	28.2	22.7	19.2	20.8	22.8	16.3	13.4	13.5
MINERALS FUELS	4.8	3.9	2.6	2.7	2.1	2.6	3.6	2.5	3.1
CHEMICALS	10.2	21.1	18.8	20.7	25.6	16.0	19.4	20.2	18.7
TEXTILE YARNS-FABRICS	5.1	5.3	5.6	5.9	4.8	5.0	4.8	4.3	4.5
CLOTHING	4.6	9.1	12.3	16.0	13.5	15.2	17.1	18.1	20.3
FOOTWEAR	1.0	1.5	1.6	1.6	1.6	1.9	1.9	1.9	1.7
LEATHER,FURS	0.4	0.4	0.6	0.4	0.4	0.6	0.7	0.6	0.6
TEXTILE AND LEATHER	11.0	16.4	20.1	23.8	20.3	22.7	24.4	24.9	27.0
MACHINES AND TRANS EQPT	0.6	1.2	2.5	1.9	1.8	4.7	5.2	6.1	5.9
OTHERS	3.3	3.1	3.1	3.5	3.5	4.5	4.5	3.8	4.2
TOTAL TRADE	100	100	100	100	100	100	100	100	100

MOROCCO - Rate of growth of merchandise exports (millions of constant 1980 dollars)

Commodity	1980-85	1986	1987	1988	1989	1990	1991	1992
AGRICULTURE	0.81	5.65	-2.20	11.30	-8.35	-3.63	28.95	-16.70
AGRO-INDUSTR. PRODUCTS	-4.54	13.78	-13.37	7.54	20.49	18.22	4.03	-9.95
MINERALS EXCL. FUELS	-2.48	-4.69	-2.57	11.74	-8.16	-5.55	-14.83	8.89
MINERALS FUELS	-4.95	2.92	7.63	10.12	2.94	34.75	-21.62	28.44
CHEMICALS	24.12	4.06	30.45	35.92	-42.74	58.32	3.95	-9.71
TEXTILE YARNS-FABRICS	9.03	21.51	25.52	-3.85	1.23	18.32	-9.17	-7.91
CLOTHING	13.21	28.39	36.18	1.97	4.44	34.59	4.92	0.31
FOOTWEAR	7.55	0.82	4.49	22.42	8.69	18.43	1.60	-22.34
LEATHER,FURS	11.08	46.03	-16.86	14.56	51.68	46.40	-11.58	-10.59
TEXTILE AND LEATHER	10.79	23.98	27.57	0.95	4.89	27.93	-1.04	-4.19
MACHINES AND TRANS EQPT	13.21	95.97	-17.97	12.23	141.85	32.81	16.19	-13.67
OTHERS	-2.36	-6.72	19.96	21.40	18.15	19.72	-15.28	-2.78
SUM	3.81	5.85	10.89	16.46	-13.51	21.32	1.16	-5.49
TOTAL TRADE	3.61	3.82	10.17	18.48	-12.47	21.34	0.97	-3.14

Table 3: TUNISIA: Structure of merchandise exports (at current prices, in percentage)

Commodity	1980	1985	1986	1987	1988	1989	1990	1991	1992
AGRICULTURE	3.5	5.8	7.5	7.6	7.6	5.8	6.3	5.2	4.8
AGRO-INDUSTR. PRODUCTS	3.7	3.9	4.8	5.0	4.7	4.1	4.7	9.7	5.4
MINERALS EXCL. FUELS	3.8	3.2	3.0	2.9	3.4	3.3	2.4	1.7	1.8
MINERALS FUELS	52.5	42.2	24.3	23.6	16.1	20.0	17.3	14.3	15.1
CHEMICALS	13.2	17.0	20.0	18.1	21.2	19.2	14.5	14.0	12.8
TEXTILE YARNS-FABRICS	2.4	2.8	3.4	3.5	3.3	3.0	3.1	2.7	2.9
CLOTHING	15.2	17.2	24.5	25.5	27.0	26.5	32.3	33.1	36.7
FOOTWEAR	0.3	0.3	0.4	0.4	0.4	0.5	0.7	1.0	1.1
LEATHER,FURS	0.8	0.9	1.4	1.3	1.3	1.3	1.6	1.7	2.3
TEXTILE AND LEATHER	18.7	21.2	29.7	30.6	31.9	31.2	37.6	38.4	43.0
MACHINES AND TRANS EQPT	2.4	3.8	5.5	6.1	7.2	6.6	7.9	8.3	8.9
OTHERS	2.1	2.6	4.9	5.7	7.5	9.5	9.0	8.1	7.9
TOTAL TRADE	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

TUNISIA: Rate of growth of merchandise exports (millions of constant 1980 dollars)

Commodity	1980-85	1986	1987	1988	1989	1990	1991	1992
AGRICULTURE	9.1	8.0	27.6	-5.1	-3.3	11.4	-13.6	1.9
AGRO-INDUSTR. PRODUCTS	2.6	6.0	17.2	1.0	8.9	18.5	113.2	-38.4
MINERALS EXCL. FUELS	-2.5	-6.3	32.2	1.8	12.3	-36.5	-22.8	21.6
MINERALS FUELS	-5.2	17.3	-6.2	-3.6	25.8	-16.4	-4.1	19.8
CHEMICALS	6.4	25.6	20.1	6.7	4.5	-12.6	-2.8	5.0
TEXTILE YARNS-FABRICS	2.7	0.8	7.6	0.8	12.9	8.9	-11.8	7.0
CLOTHING	2.4	17.6	11.1	12.4	22.7	25.8	6.2	8.7
FOOTWEAR	-3.9	16.4	-3.9	10.2	70.5	37.6	49.0	12.1
LEATHER,FURS	2.8	30.3	-4.2	12.9	19.6	26.0	9.5	36.3
TEXTILE AND LEATHER	2.3	15.9	9.7	11.1	22.1	24.4	5.6	9.9
MACHINES AND TRANS EQPT	10.2	29.9	19.4	24.5	14.3	24.3	8.4	5.4
OTHERS	4.7	61.9	23.9	49.8	73.9	27.0	2.8	1.1
TOTAL TRADE	-0.2	18.2	7.1	6.0	-4.8	27.2	3.2	6.5

Table 4: Morocco - Exports of agriculture and agro-industry

(millions of current dollars)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	110.63	220.93	306.57	357.29	414.2	422.91	523.78	607.31	554.19
032 FISH ETC TINNED,PREPARED	85.16	71.93	96.05	94.16	110.28	118.31	141.93	154.9	159.34
05 FRUIT AND VEGETABLES	498.6	319.51	396.5	391.18	457.7	412.76	499.88	568.47	468.89
053 FRUIT PRESERVED,PREPARED	19.3	32.93	29.66	23.91	57.79	60.54	71.11	55.13	29.25
055 VEGTBLES ETC PRSVD,PREPD	59.27	52.6	57.73	63.84	72.11	88.8	119.26	123.79	111.39

Percentage of total trade

	1980	1985	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	4.60	10.20	12.63	12.73	11.42	12.68	12.38	14.17	13.93
- 032 FISH ETC TINNED,PREPARED	3.54	3.32	3.96	3.35	3.04	3.55	3.35	3.61	4.01
05 FRUIT AND VEGETABLES	20.75	14.76	16.33	13.94	12.62	12.37	11.81	13.26	11.79
- 053 FRUIT PRESERVED,PREPARED	0.80	1.52	1.22	0.85	1.59	1.81	1.68	1.29	0.74
- 055 VEGTBLES ETC PRSVD,PREPD	2.47	2.42	2.38	2.27	1.99	2.66	2.82	2.89	2.80
Total (in % of total trade)	25.35	24.96	28.96	26.67	24.05	25.05	24.19	27.43	25.72

Average rate of growth in constant 1980 dollars

	1980-85	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	20.18	8.62	4.46	10.71	7.37	1.43	22.81	-14.28
- 032 FISH ETC TINNED,PREPARED	-3.41	29.31	-15.01	-1.90	14.68	2.83	23.26	
05 FRUIT AND VEGETABLES	-4.26	-2.86	-11.57	11.74	-5.16	-3.62	20.46	-22.52
- 053 FRUIT PRESERVED,PREPARED	11.17	-12.78	-30.11	102.45	11.98	0.68	-12.44	
- 055 VEGTBLES ETC PRSVD,PREPD	-2.45	6.28	-4.13	-5.39	31.63	15.12	17.23	

Table 4: Tunisia - Exports of agriculture and agro-industry

(millions of current dollars)

Commodity	1980	1985	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	28.2	32.6	59.5	81.8	106.9	90.9	108.3	82	72.9
04 CEREALS AND PREPARATIONS	5.1	4.3	5.2	8	9.3	11.4	19.6	15.9	28.5
05 FRUIT AND VEGETABLES	41.7	48.1	64.5	77.6	68.3	65.1	76.4	87.8	83.9
- 053 FRUIT PRESERVED,PREPARED	2.35	0.56	0.68	0.81	0.55	0.62	0.53	0.5	0.3
- 055 VEGTBLES ETC PRSVD,PREPD	1.41	1.53	2.77	9.86	9.27	5.24	0.88	1	1.8
12 TOBACCO AND MFRS	2.6	0.6	2.3	1.2	1.3	6	17.5	25.1	22.1
4215 OLIVE OIL	61.5	48.3	67	79.5	82.3	86	121.2	290.7	158.4

Percentage of total trade

Commodity	1980	1985	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	1.26	2.00	3.38	3.80	4.47	3.10	3.10	2.22	1.80
04 CEREALS AND PREPARATIONS	0.23	0.26	0.30	0.37	0.39	0.39	0.56	0.43	0.71
05 FRUIT AND VEGETABLES	1.87	2.96	3.67	3.61	2.85	2.22	2.18	2.37	2.08
- 053 FRUIT PRESERVED,PREPARED	0.11	0.03	0.04	0.04	0.02	0.02	0.02	0.01	0.01
- 055 VEGTBLES ETC PRSVD,PREPD	0.06	0.09	0.16	0.46	0.39	0.18	0.03	0.03	0.04
12 TOBACCO AND MFRS	0.12	0.04	0.13	0.06	0.05	0.20	0.50	0.68	0.55
4215 OLIVE OIL	2.75	2.97	3.81	3.69	3.44	2.93	3.46	7.86	3.92
Total (in % of total trade)	6.23	8.23	11.28	11.53	11.20	8.85	9.80	13.56	9.05

Average annual rate of growth in constant 1980 dollars

Commodity	1980-85	1986	1987	1988	1989	1990	1991	1992
03 FISH AND PREPARATIONS	11.5	44.9	34.1	17.8	-12.6	2.2	-25.9	-9.1
04 CEREALS AND PREPARATIONS	1.3	-5.4	48.9	5.0	26.0	49.5	-20.5	83.3
05 FRUIT AND VEGETABLES	11.4	6.4	17.4	-20.7	-2.1	0.6	12.4	-2.3
- 053 FRUIT PRESERVED,PREPARED	-18.7	-3.6	16.2	-38.8	15.8	-26.7	-7.7	-31.9
- 055 VEGTBLES ETC PRSVD,PREPD	10.1	43.7	247.2	-15.3	-41.9	-85.6	11.2	82.0
12 TOBACCO AND MFRS	-19.2	204.3	-49.1	-2.4	374.2	150.1	40.3	-10.1
4215 OLIVE OIL	3.2	10.1	15.7	-6.7	7.4	20.9	134.7	-44.3

Table 5: Morocco: Imports of goods and non factor services
(millions of current dollars)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
Food, Beverages, Tobacco	722.7	509.7	478	477.6	511.5	588	581.7	592.1	892.3
Other consumer goods	335.6	275.3	383.1	493.2	529.1	591.1	803.2	856.9	716.1
Energy	1010.5	1079.1	599.5	740.3	631.6	843	1169.4	993.2	1122.1
Intermediate goods	1406	1344.5	1449.9	1637.7	2049.4	2057.6	2500.3	2559.6	2663.5
primary	502.7	603.6	618.8	654.4	784.9	628.1	834.2	808.2	927.8
manufactures	903.3	740.9	831.1	983.3	1264.5	1429.5	1666.2	1751.4	1735.7
Capital goods	809	652.1	910.7	883.6	1072	1408.9	1853.7	1870.4	1961.9
Merchandise Imports (cif)	4283.8	3860.7	3821.1	3850.1	4359.9	4991.5	6281.6	6252.8	6693.9
Non factor services	963.5	480.7	870.7	830.2	782.1	798.7	941.6	817.6	872.6
GNFS	5247.3	4341.4	4691.8	4680.3	5142	5790.2	7223.2	7070.4	7566.5
Percentage composition									
Food, Beverages, Tobacco	13.77	11.74	10.19	10.20	9.95	10.16	8.05	8.37	11.79
Other consumer goods	6.40	6.34	8.17	10.54	10.29	10.21	11.12	12.12	9.46
Energy	19.26	24.86	12.78	15.82	12.28	14.56	16.19	14.05	14.83
Intermediate goods	26.79	30.97	30.90	34.99	39.86	35.54	34.61	36.20	35.20
primary	9.58	13.90	13.19	13.98	15.26	10.85	11.55	11.43	12.26
manufactures	17.21	17.07	17.71	21.01	24.59	24.69	23.07	24.77	22.94
Capital goods	15.42	15.02	19.41	18.88	20.85	24.33	25.66	26.45	25.93
Merchandise Imports (cif)	81.64	88.93	81.44	82.26	84.79	86.21	86.96	88.44	88.47
Non factor services	18.36	11.07	18.56	17.74	15.21	13.79	13.04	11.56	11.53
	100	100	100	100	100	100	100	100	100

Rate of growth in constant 1980 dollars

	1980-85	1986	1987	1988	1989	1990	1991	1992
Food, Beverages, Tobacco	0.06	-4.44	16.18	-15.54	-6.21	7.90	16.64	47.44
Other consumer goods	-2.96	18.01	17.22	0.00	12.52	28.61	4.46	-19.89
Energy	5.65	-1.63	8.76	2.50	14.69	5.45	-0.50	11.08
Intermediate goods	2.30	0.46	21.91	24.97	-1.66	10.81	4.10	5.12
primary	5.01	6.32	12.22	20.30	-23.34	24.66	-2.77	20.39
manufactures	0.66	-3.57	29.27	28.04	11.75	4.93	7.56	-1.83
Capital goods	-3.30	18.45	-11.66	13.09	32.34	24.53	-1.18	1.08
Merchandise Imports (cif)	1.45	2.86	11.36	9.21	7.71	12.72	3.20	8.44
Non factor services	-12.14	53.62	-13.19	-12.18	2.83	11.59	-14.96	2.20

Table 5: Tunisia - Imports of goods & non factor services
(millions of current dollars)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
Food	387.9	333.37	361.46	312.42	554.21	578.32	505.86	336.25	429.67
Consumer Goods	594.57	542.36	622.17	777.24	932.5	1122.62	1570.42	1522.93	1898.69
Fuel	799.26	369.56	251.76	318.21	243.41	379.65	486.85	395.63	449
Intermediate Goods	1098.77	892.27	1030.23	1100.04	1344.25	1455.81	1726.4	1620.92	1896.31
Capital Goods	741.98	603	635.77	519.73	617.51	835.88	1235	1303.81	1557.89
Imports of Total Goods (CIF)	3622.47	2740.56	2901.39	3027.63	3691.89	4372.27	5524.54	5179.54	6231.57
Non factor services	363.95	466.51	462.59	445.16	513.99	509.53	610.16	576.68	683.51
Total	3986.42	3207.07	3363.98	3472.79	4205.88	4881.8	6134.7	5756.22	6915.08
Percentage composition									
Food	9.73	10.39	10.75	9.00	13.18	11.85	8.25	5.84	6.21
Consumer Goods	14.91	16.91	18.50	22.38	22.17	23.00	25.60	26.46	27.46
Fuel	20.05	11.52	7.48	9.16	5.79	7.78	7.94	6.87	6.49
Intermediate Goods	27.56	27.82	30.63	31.68	31.96	29.82	28.14	28.16	27.42
Capital Goods	18.61	18.80	18.90	14.97	14.68	17.12	20.13	22.65	22.53
Imports of Total Goods (CIF)	90.87	85.45	86.25	87.18	87.78	89.56	90.05	89.98	90.12
Non factor services	9.13	14.55	13.75	12.82	12.22	10.44	9.95	10.02	9.88
	100	100	100	100	100	100	100	100	100

Rate of growth in constant 1980 dollars

	1980-85	1986	1987	1988	1989	1990	1991	1992
Food	2.53	23.60	-7.79	50.08	-12.72	-19.07	-35.52	21.92
Consumer Goods	2.96	-8.11	-0.08	19.26	27.40	32.36	-0.28	9.10
Fuel	-11.07	7.22	22.56	-11.32	35.47	-0.74	-13.19	22.09
Intermediate Goods	0.77	7.89	-0.13	17.13	10.97	4.00	-8.90	13.94
Capital Goods	0.89	-10.32	-11.58	15.49	19.72	13.25	-3.59	7.55
Imports of Total Goods (CIF)	0.63	1.07	-24.32	14.00	33.00	28.16	3.74	12.23
Non factor services	10.70	-22.44	-3.84	9.73	0.02	2.98	-9.79	7.33

Table 6: Morocco - Imports of main agricultural products
(millions of current dollars)

	1980	1985	1986	1987	1988	1989	1990	1991	1992
00 LIVE ANIMALS	10696	5799	20549	13134	6215	2840	7762	12897	21078
02 DAIRY PRODUCTS AND EGGS	57507	24631	31767	29352	36904	59939	67080	62974	89936
04 CEREALS AND PREPARATIONS	337423	291170	191416	202481	200628	230948	210163	216641	406489
06 SUGAR AND PREPS HONEY	157283	40026	45612	45606	68616	80223	82340	69336	95952
07 COFFEE TEA COCOA SPICES	82174	90099	98541	104390	116685	114507	112213	101412	117966
12 TOBACCO AND MFRS	32782	32205	48504	47058	39538	54275	43710	77545	66163
Percentage of total imports in current dollars									
00 LIVE ANIMALS	0.26	0.15	0.54	0.31	0.13	0.05	0.11	0.19	0.29
02 DAIRY PRODUCTS AND EGGS	1.37	0.64	0.84	0.69	0.77	1.09	0.97	0.92	1.22
04 CEREALS AND PREPARATIONS	8.07	7.56	5.05	4.79	4.20	4.21	3.04	3.15	5.53
06 SUGAR AND PREPS HONEY	3.76	1.04	1.20	1.08	1.44	1.46	1.19	1.01	1.30
07 COFFEE TEA COCOA SPICES	1.96	2.34	2.60	2.47	2.44	2.08	1.62	1.48	1.60
12 TOBACCO AND MFRS	0.78	0.84	1.28	1.11	0.83	0.99	0.63	1.13	0.90
Total (in % of total merchandise)	16.21	12.57	11.51	10.45	9.82	9.88	7.56	7.87	10.84

Rate of growth in constant 1980 dollars

	1980-85	1986	1987	1988	1989	1990	1991	1992
00 LIVE ANIMALS	-5.06	261.07	-25.68	-62.68	-62.72	198.11	90.40	59.90
02 DAIRY PRODUCTS AND EGGS	-9.44	31.42	7.44	-0.85	32.52	22.07	7.58	39.72
04 CEREALS AND PREPARATIONS	4.18	-33.01	23.00	-21.86	-6.08	-0.74	18.13	83.57
06 SUGAR AND PREPS HONEY	-18.39	16.12	16.26	18.65	-4.61	11.95	-3.50	35.39
07 COFFEE TEA COCOA SPICES	9.30	11.44	23.18	-11.85	-19.93	6.89	3.56	13.81
12 TOBACCO AND MFRS	6.92	53.47	12.81	-33.74	12.00	-12.16	103.30	-16.52

Table 6: Tunisia - Imports of main agricultural products
(millions of current dollars)

Commodity	1980	1985	1986	1987	1988	1989	1990	1991	1992
01 MEAT AND PREPARATIONS	7999	15175	17276	21443	19273	19368	27213	19253	24234
02 DAIRY PRODUCTS AND EGGS	43049	40202	45627	32203	50814	56932	42008	31506	60982
04 CEREALS AND PREPARATIONS	185344	100836	154128	128376	299816	294720	220401	107885	145403
06 SUGAR AND PREPS HONEY	76864	24318	34135	35617	41674	51916	83031	48431	66198
07 COFFEE TEA COCOA SPICES	26627	41034	39769	31475	42929	31317	30357	32834	37285
08 ANIMAL FEEDING STUFF	22645	12994	25402	13890	38699	39309	33907	30391	35016
12 TOBACCO AND MFRS	17608	20796	19587	20323	15635	23309	29041	34258	52786
	3508706	2586932	2897696	3021729	3680947	4365990	5471095	5184856	6425382

Percentage of total imports in current dollars

01 MEAT AND PREPARATIONS	0.23	0.59	0.60	0.71	0.52	0.44	0.50	0.37	0.38
02 DAIRY PRODUCTS AND EGGS	1.23	1.55	1.57	1.07	1.38	1.30	0.77	0.61	0.95
04 CEREALS AND PREPARATIONS	5.28	3.90	5.32	4.25	8.15	6.75	4.03	2.08	2.26
06 SUGAR AND PREPS HONEY	2.19	0.94	1.18	1.18	1.13	1.19	1.52	0.93	1.03
07 COFFEE TEA COCOA SPICES	0.76	1.59	1.37	1.04	1.17	0.72	0.55	0.63	0.58
08 ANIMAL FEEDING STUFF	0.65	0.50	0.88	0.46	1.05	0.90	0.62	0.59	0.54
12 TOBACCO AND MFRS	0.50	0.80	0.68	0.67	0.42	0.53	0.53	0.66	0.82
TOTAL (in % of total merchandise)	10.83	9.87	11.59	9.38	13.82	11.84	8.52	5.87	6.57

Rate of growth in constant 1980 dollars

	1980-85	1986	1987	1988	1989	1990	1991	1992
01 MEAT AND PREPARATIONS	20.12	29.77	32.42	-23.96	-15.95	30.00	-31.37	20.10
02 DAIRY PRODUCTS AND EGGS	4.25	29.37	-24.70	33.50	-6.29	-31.73	-27.24	84.68
04 CEREALS AND PREPARATIONS	-6.43	74.24	-11.14	97.59	-17.78	-30.81	-52.51	28.59
06 SUGAR AND PREPS HONEY	-16.04	60.01	11.32	-1.01	4.20	47.97	-43.42	30.42
07 COFFEE TEA COCOA SPICES	15.23	10.48	-15.56	15.39	-38.98	-10.32	4.93	8.35
08 ANIMAL FEEDING STUFF	-5.43	122.84	-41.66	135.72	-15.04	-20.19	-13.05	9.93
12 TOBACCO AND MFRS	9.26	7.36	10.70	-34.91	24.70	15.27	14.44	47.02
TOTAL	-1.32	7.38	-3.47	16.88	16.54	8.70	-6.88	16.40

Table 7:
Share of Morocco's and Tunisia's exports in merchandise imports of the EU and the OECD

	1980	1983	1987	1990	1991	1992
Morocco's share in:						
EU12	0.280	0.265	0.259	0.303	0.296	0.298
OECD	0.172	0.161	0.159	0.189	0.195	0.192
Tunisia's share in:						
EU12	0.290	0.210	0.213	0.228	0.228	0.243
OECD	0.167	0.125	0.118	0.128	0.130	0.138

Table 8: Exports - Direction of trade

	1980	1981	1982	1983	1985	1986	1987	1988	1989	1990	1991	1992
Morocco												
European Union	62.7	57.1	62.1	60.6	58.6	58.2	61.3	58.6	64.6	65.0	62.4	64.0
Other European countries	3.3	2.6	3.1	2.8	2.7	2.5	3.0	2.5	2.5	2.0	2.0	2.0
Other industrial countries	3.3	4.7	4.8	5.2	6.5	7.2	7.2	8.2	8.0	6.5	8.6	9.6
East Europe countries	11.4	12.2	7.1	6.1	7.8	7.2	5.0	4.9	3.9	2.1	0.7	0.7
Arab & Gulf countries	3.6	4.9	4.1	4.8	6.1	5.2	6.1	7.1	8.2	10.3	11.4	8.9
Other LDC	15.7	18.6	18.8	20.5	18.4	19.8	17.4	20.7	12.8	14.1	15.0	14.7
World	100	100	100	100	100	100	100	100	100	100	100	100
Tunisia												
European Union	72.1	60.5	58.8	63.5	71.6	73.8	78.1	74.7	73.7	77.8	76.6	78.0
Other European countries	0.4	2.6	1.2	0.5	1.7	1.0	1.3	0.9	0.7	0.9	1.0	0.8
Other industrial countries	14.6	18.2	23.1	20.8	10.4	0.9	2.0	1.3	2.6	1.2	1.0	1.1
East Europe countries	1.4	1.7	2.3	2.3	1.8	3.6	3.2	2.7	1.7	1.5	2.2	1.0
Arab & Gulf countries	3.5	8.6	7.3	5.8	6.6	9.1	6.6	7.1	10.6	10.3	10.3	9.8
Other LDC	7.9	8.4	7.3	7.2	7.8	11.7	8.8	13.3	10.8	8.3	8.9	9.3
World	100	100	100	100	100	100	100	100	100	100	100	100

Note: EU 12 include Belgium-Luxembourg, Denmark, France, Greece, Irland, Italy, Netherland, Portugal, Spain, U.K., Germany; Other European countries include: Andorra, Austria, Iceland, Finland, Faeroe Greenland, Norway, Sweden, Switzerland, Cyprus and Malta; East European countries include: Albania, Bulgaria, Bielorussia, Czechoslovakia, Hungary, DDR, Poland, Romania, Ukraine, USSR-Russia; Other industrial countries include: USA, Canada, Japan, Australia, New Zealand;
Arab and Gulf countries include: Algeria, Bahrain, Djibouti, Egypt, Iran, Iraq, Jordan, Kuwait, Lebanon, Lybia, Morocco, Oman, Qatar, Saudi Arabia, Tunisia.
Other LDC includes all the remaining countries

Table 9: Direction of trade - EU12 Exports - Percentage composition

Morocco	1980	1985	1986	1987	1988	1989	1990	1991	1992
EU12	62.68	58.56	58.21	61.33	56.59	64.65	65.04	62.36	64.04
Belgium -Lux.	7.75	7.49	6.27	6.51	6.62	8.81	5.98	5.48	5.41
Denmark	0.94	1.76	0.80	1.51	1.53	0.50	0.15	0.13	0.20
France	40.16	40.29	46.84	48.12	45.98	45.32	48.50	50.99	51.18
Greece	1.79	1.66	1.43	1.45	0.98	0.96	0.64	0.66	0.52
Ireland	0.26	0.22	0.21	0.26	0.36	0.71	0.64	0.98	1.03
Italy	8.97	9.38	9.26	8.92	9.94	9.79	10.64	9.93	8.71
Netherlands	9.43	6.19	5.47	5.75	5.33	5.21	4.94	3.97	4.88
Portugal	1.65	2.94	1.78	1.86	1.49	1.72	1.24	1.53	1.37
Spain	9.41	12.62	11.40	11.07	12.65	12.86	14.10	14.12	14.10
United Kindom	6.60	5.65	5.09	4.38	5.17	5.96	5.00	4.40	5.23
Germany	13.04	11.81	11.46	10.17	9.96	8.16	8.17	7.82	7.38
Total	100	100	100	100	100	100	100	100	100

Tunisia	1980	1985	1986	1987	1988	1989	1990	1991	1992
EU12	72.15	71.57	73.85	78.13	74.69	73.68	77.78	76.56	78.01
Belgium -Lux.	4.12	5.85	7.44	8.33	7.94	8.30	8.99	8.16	8.85
Denmark	0.32	0.18	0.08	0.27	0.28	0.63	0.48	0.59	0.70
France	21.37	37.14	31.53	27.69	34.59	33.43	34.24	32.97	34.72
Greece	25.14	0.43	8.21	7.90	1.99	5.02	0.56	0.82	2.67
Ireland	0.20	0.75	0.29	0.42	0.29	0.33	0.12	0.05	0.19
Italy	21.91	23.51	19.58	21.13	25.34	25.38	27.21	25.78	21.88
Netherlands	6.18	3.08	5.11	4.13	3.92	3.40	3.27	3.52	3.28
Portugal	0.03	0.08	0.03	0.55	0.05	0.25	0.23	0.19	0.11
Spain	0.63	9.69	4.84	3.34	4.56	3.73	3.38	4.79	3.52
United Kindom	2.25	3.90	2.59	1.13	2.21	2.05	2.11	1.68	2.31
Germany	17.85	15.39	20.30	25.09	18.83	17.49	19.41	21.45	21.77
Total	100	100	100	100	100	100	100	100	100

TABLE 10
Contribution to merchandise export growth

MOROCCO				
Commodity	1980-83	1983-87	1987-90	1990-92
56 FERTILIZERS MANUFACTURED	0.996	-0.339	4.099	-1.247
Other chemicals	0.606	0.759	-0.971	0.501
65 TEXTILE YARN,FABRIC ETC	-0.339	0.730	-0.070	-0.200
84 CLOTHING	0.740	8.000	11.001	4.145
85 FOOTWEAR	0.095	0.168	0.363	0.153
61 LEATHER,DRESSED FUR,ETC	0.001	0.057	0.243	0.012
Electrical Machinery	0.147	0.760	1.215	0.653
Non electrical machinery	-0.233	0.944	1.443	1.042
Agricultural Products	-3.212	3.183	3.522	1.082
Agro-industry	-0.726	0.725	2.084	-0.975
27 CRUDE FERTLZR,MNES	-3.546	-1.900	-0.321	-1.037
Other Minerals	-1.032	-0.160	1.111	-0.443
3 MINERAL FUELS ETC	-0.407	-0.495	0.573	0.070
Merchandise exports to EU	-6.911	12.433	24.292	3.758
TUNISIA				
Commodity	1980-83	1983-87	1987-90	1990-92
56 FERTILIZERS MANUFACTURED	0.039	0.625	0.111	-0.248
Other chemicals	-0.305	-0.387	0.164	-0.084
65 TEXTILE YARN,FABRIC ETC	-0.342	0.557	0.047	0.085
84 CLOTHING	-0.326	5.592	9.091	5.511
85 FOOTWEAR	-0.061	0.038	0.164	0.360
61 LEATHER,DRESSED FUR,ETC	0.058	0.173	0.282	0.247
Electrical Machinery	-0.108	0.904	1.097	0.970
Non electrical machinery	-0.081	1.214	1.726	1.466
Agricultural Products	0.013	1.150	0.445	-0.352
Agro-industry	-1.834	0.006	1.123	0.684
27 CRUDE FERTLZR,MINRLS NES	-0.286	0.042	-0.032	-0.075
Other Minerals	-0.102	0.055	0.247	-0.072
3 MINERAL FUELS ETC	-10.276	1.030	1.484	-2.299
Merchandise exports to EU	-13.609	11.000	15.950	6.191

Table 11: Contribution of partner regions to total export growth

Morocco	1980-83	83-87	87-90	90-92
European community	-3.6	5.0	10.5	-2.4
Other European countries	-0.3	0.2	0.0	-0.1
Other industrial countries	0.5	1.1	0.8	1.7
East Europe countries	-1.9	0.2	-0.5	-0.3
Arab & Gulf countries	0.2	0.8	3.1	-1.0
Other LDC	0.8	0.7	1.1	-0.2
World	-5.0	8.0	14.7	-3.0

Tunisia	1980-83	83-87	87-90	90-92
European community	-6.2	6.4	13.1	5.9
Other European countries	-0.1	0.6	0.0	0.0
Other industrial countries	1.2	-3.4	0.0	0.0
East Europe countries	0.2	0.3	-0.1	-0.2
Arab & Gulf countries	0.7	0.5	3.4	0.5
Other LDC	-0.6	0.8	1.7	1.2
World	-5.7	3.6	17.6	7.5

Table 12: MOROCCO: STRUCTURE OF THE MANUFACTURING SECTOR

(Sectoral Shares in Total Manufacturing- Percentages)

	No. Employees		Value Added		Production		Exports	
Sector	1980	1990	1980	1990	1980	1990	1980	1990
Agro-industries								
10 Food Products	8.2	6.6	8.4	6.5	12.9	11.6	1.2	0.9
11 Other Food Products	7.9	15.0	11.3	10.6	14.8	13.7	21.9	19.3
12 Beverages & Tobacco	3.8	2.4	6.4	17.9	7.9	5.8	1.4	0.5
Subtotal	19.9	24.0	26.1	35.0	35.6	31.1	24.5	20.7
Textile and Leather								
13 Spinning & Weaving	22.0	16.1	13.0	8.9	11.0	9.2	11.0	12.0
14 Clothing	9.7	20.9	2.1	6.4	1.5	5.6	6.5	19.8
15 Leather & Footwear	4.3	3.8	2.5	1.9	2.0	2.1	3.2	4.9
Subtotal	36.0	40.8	17.6	17.3	14.5	16.9	20.7	36.7
Chemical & Related Industries								
16 Wood & Wood Products	3.8	3.0	3.2	2.2	2.9	2.7	5.3	1.8
17 Paper & Printing	4.3	3.5	5.8	4.3	4.6	4.3	4.4	2.4
18 Mineral products	8.0	7.4	11.0	10.0	8.1	6.7	1.2	0.7
25 Chemicals (Phosphate Derivatives)	7.3	6.2	14.5	11.4	15.7	18.4	40.4	26.3
26 Rubber & Plastic	3.2	2.3	3.5	2.8	2.9	2.3	0.2	0.8
27 Other Manufacturing	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.1
Subtotal	26.8	22.6	38.2	30.8	34.1	34.5	51.5	32.0
Metals and Machinery								
19 Basic metals	0.8	0.5	1.0	2.6	0.7	2.6	0.2	1.7
20 Metal products	7.2	4.8	7.1	4.7	5.5	5.1	0.3	0.7
21 Machinery & Equipment	2.1	1.8	1.9	1.8	1.9	1.5	0.0	0.0
22 Transport Equipment	3.3	2.4	4.0	3.9	4.5	4.1	1.7	2.9
23 Electronics/Electrical Machinery	3.7	2.9	4.0	3.7	3.1	4.1	1.0	5.2
24 Office Machinery/Precision	0.1	0.3	0.1	0.2	0.1	0.2	0.0	0.0
Subtotal	17.2	12.7	18.1	16.9	15.8	17.6	3.2	10.6
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Industry, Commerce and Privatization.

Table 13: TUNISIA: STRUCTURE OF THE MANUFACTURING SECTOR

(Percentages)

	No. of Employees		Value Added		Exports	
SECTOR/SUB-SECTOR	**1980**	**1990**	**1980**	**1990**	**1980**	**1990**
Construction Materials	13.3	12.7	14.9	15.1	-	-
Machinery	12.8	14.7	13.0	13.5	8.4	15.5
Chemicals	5.5	6.1	11.9	6.2	32.7	17.9
Textiles & Clothing	39.4	33.5	23.7	31.5	46.5	51.4
Other	17.0	18.8	12.2	14.1	3.4	9.3
MANUFACTURING	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Plan

Table 14: CHRACTERISTICS OF THE MANUFACTURING SECTOR (Percentages)

Sector/Subsector	Sectoral Share of Value Added				Sectoral Share of Exports				Share of Exports in Production			
	MOROCCO		TUNISIA		MOROCCO		TUNISIA		MOROCCO		TUNISIA	
	1980	1990	1980	1990	1980	1990	1980	1990	1980	1990	1983	1988
Agro-Industries	26.1	35.0	24.3	19.5	24.5	20.7	9.0	6.0	9	17	7	11
Food Products	8.4	6.5			1.2	0.9			1	2		
Other Food Products	11.3	10.6			21.9	19.3			20	35		
Beverages & Tobacco	6.4	17.9			1.4	0.5			2	2		
Textiles, Clothing and Leather	17.6	17.3	23.7	31.5	20.7	36.7	46.5	51.4	19	54	47	63
Spinning & Weaving	13.0	8.9			11.0	12.0			13	32		
Clothing	2.1	6.4			6.5	19.8			56	88		
Leather & Footwear	2.5	1.9			3.2	4.9			22	58		
Chemical & Related Industries	38.1	30.7	26.8	21.3	51.5	32.0	32.7	17.9	20	23	40	34
Wood & Wood Products	3.2	2.2			5.3	1.8			25	16		
Paper & Printing	5.8	4.3			4.4	2.4			13	14		
Mineral products	11.0	10.0			1.2	0.7			2	2	19	21
Chemicals (Phosphate Derivative	14.5	11.4			40.4	26.3			34	35		
Rubber & Plastic	3.5	2.8			0.2	0.8			1	9		
Metals and Machinery	18.1	16.9	13.0	13.5	3.2	10.6	8.4	15.5	3	15	10	21
Basic metals	1.0	2.6			0.2	1.7			3	17		
Metal products	7.1	4.7			0.3	0.7			1	4		
Machinery & Equipment	1.9	1.8			0.0	0.0			0	0		
Transport Equipment	4.0	3.9			1.7	2.9			5	18		
Electronics/Electrical Machinery	4.0	3.7			1.0	5.2			4	32		
Office Machinery/Precision	0.1	0.2			0.0	0.0			0	1		
Other Manufacturing	0.1	0.1	12.2	14.1	0.0	0.1	3.4	9.3	0	15	17	40
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	13	25	25	35

Sources: Morocco - Ministry of Industry; Tunisia - Ministry of Plan

TABLE 15

EXPORT ORIENTATION OF THE MANUFACTURING SECTOR
(Ratio of Exports to Production)

MOROCCO

	1980			1990		
	Above Average	Close to Average	Below Average	Above Average	Close to Average	Below Average
Manufacturing		0.133			0.249	
Agro Industries						
Food Products			0.013			0.020
Other Food Prod.	0.197			0.349		
Beverages & Tobac.			0.024			0.021
Textile & Leather						
Spinning & Weav.		0.134		0.324		
Clothing		0.131		0.879		
Leather & Footwr.	0.219			0.579		
Chemical & Related						
Wood & Wood Products	0.247					0.161
Paper & Printing			0.128			0.140
Mineral Products			0.019			0.025
Chemicals	0.342			0.355		
Rubber & Plastic			0.010			0.090
Other Manufacturing						0.151
Metals & Machinery						
Basic Metals			0.028			0.167
Metal Products			0.008			0.035
Machinery & Equip.						0.004
Transport Equip.			0.051			0.179
Electric & Related			0.043	0.316		
Office Mach./Preci.						0.01

TUNISIA

	1983			1988		
	Above Average	Close to Average	Below Average	Above Average	Close to Average	Below Average
Manufacturing		0.25			0.35	
Agro-industries			0.07			0.11
Chemicals	0.40				0.34	
Textile and Leather	0.47			0.63		
Machinery			0.10			0.25
Others			0.17	0.40		

SOURCE: Morocco - Calculated based on data from the Ministry of Commerce and industry.
Tunisia - Calculated based on enterprise surveys by Institut National de Statistique.

Table 16: PERCENTAGE SHARE OF FOREIGN OWNERSHIP				
	Export - oriented firms (export share >= 10%)		Domestic - market oriented firms (export share < 10%)	
	Morocco	Tunisia	Morocco	Tunisia
Agro - Industries	20.8	10.0	6.8	2.3
less than 100 workers	23.3	0.0	5.1	1.7
100 workers and more	20.0	51.0	7.7	6.2
Textiles, clothing and Footwear	16.8	52.9	15.3	n.a.
less than 100 workers	19.8	40.9	7.2	n.a.
100 workers and more	16.0	62.0	21.6	n.a.
Chemicals	70.0	10.6	18.3	5.7
less than 100 workers	23.0	4.5	12.1	5.4
100 workers and more	72.3	25.0	21.6	6.8
Metals and Machinery	38.9	37.7	19.5	6.8
less than 100 workers	18.4	33.9	18.6	5.9
100 workers and more	42.4	42.8	19.9	9.1
Other Manufacturing	n.a.	22.7	n.a	4.5
less than 100 workers	11.9	18.2	10.8	4.1
100 workers and more	n.a.	40.0	n.a.	6.5

THE EXPORT DEMAND AND SUPPLY FUNCTIONS

This Annex describes the theoretical specification of the export supply and demand equations discussed in Chapter II.

The Export Supply Equation

The export supply equation was derived from a simple model of firm's behavior. Productive capacity (Y^*) is assumed to be fixed in the short-run but the firm can vary the rate of capacity utilization. Total production (Y) is then equal to the rate of capacity utilization (h) multiplied by the level of capacity. In addition to h, the firm must determine the allocation of output between domestic and foreign markets. Commodities produced for domestic and foreign markets are not perfect substitutes, but are related through a constant elasticity transformation (CET) curve. It is assumed that (variable) costs of production are a convex function of the level of capacity utilization. Formally, the firm's problem can be described as follows:

$$\max \; p_x X + p_d D - w_0 \, (h/h_n)^{\beta} \, Y^* h_n \qquad \text{(A1)}$$

s.t.

$$X^{1-k} + AD^{1-k} = B \, (Yh)^{\gamma} \, e^{u} \qquad \text{(A2)}$$

The firm maximizes short-run profits subject to prices and the production technology. X, D, p^x, p^d denote exports, domestic sales, export prices and the price of domestically sold output, respectively; h_n represents the 'normal' level of capacity utilization, u is a stochastic exponential shock, while A are B parameters in the production relationship. In eq. A1, variable costs of production increase as a function of the base wage (w_0) and of the ratio between the actual level of capacity utilization (h) and the normal (h_n) level of capacity utilization. Equation A2 represents the CET curve, $\tau = -1/k$ is the elasticity of transformation, and γ is a parameter measuring the shift in the transformation frontier following a change in productive capacity Y^*h_n. Short-run profit maximization subject to eq. A2 leads to the following export supply equation:

$$X = \left(\frac{p^x}{w_0}\right)^{\tau} \left(\frac{h_n}{h}\right)^{\tau(\beta-\gamma)} \left(Y^* h_n\right)^{\tau(\gamma-1)} e^{\tau u} \tag{A3}$$

In general, export supply will be an increasing function of the relative price of exports and of the existing productive capacity. Eq. A3 also shows that domestic demand pressure, measured by the rate of capacity utilization, will have a negative impact on export supply, even after controlling for prices, provided that the second-order condition $\beta > \gamma$ is satisfied.

In order to carry out the regression analysis for the purpose of estimation, proxies are needed for both the level of productive capacity and the rate of capacity utilization. For the level of capacity utilization we selected the fitted value of a regression of actual industrial value added on a time trend and other determinants (wages, cost of capital); for the rate of capacity utilization we selected the ratio between actual and estimated industrial value added. Following Pagan (1984),[1] we included among the regressors the level of actual value added rather than the estimated proxy for the level of capacity. The latter is used instead as an instrument for the former. The procedure is designed to yield consistent estimates of the variance-covariance matrix of the coefficients.

Equation A3 was estimated for both Tunisia and Morocco. For Tunisia, manufacturing exports were deflated by the United Nations unit value index of Tunisia's manufactured exports. For Morocco, existing deflators for finished products exports were used.[2] The latter exclude resource-based exports (mainly phosphate derivative and processed food) from total manufacturing exports. For both Morocco and Tunisia, lack of reliable data on wages prompted the use of alternative indicators. After experimenting both with the minimum wage and the Consumer Price Index, the latter was chosen on the ground of statistical performance. The estimation results are presented in Table A1. Export supply appears to be significantly responsive to price incentives in both Tunisia and Morocco. Furthermore, domestic demand conditions, as measured by the proxy for the rate of capacity utilization, have a significant impact on the export supply in both countries. The statistical properties of the two equations are quite satisfactory. The Sargan test does not provide any indication that the (overidentifying)

1/ Pagan, A., (1984), "Econometric Issues in the Analysis of Regressions with Generated Regressions," International Economic Review, 25, 221-247.

2/ Deflators obtained from "La Direction de la Statistique", Ministry of Economic and Social Affairs.

instruments are correlated with the error term, while the Chow test, in its instrumental variable version (Kiviet, 1985)[3] indicates that the equation is stable.

Table A1: THE EXPORT SUPPLY EQUATION

Dep. Var.: ln X(t)	Morocco	Tunisia
Constant	-22.76	-39.13
	(12.6)	(1.14)
Relative prices (a)	1.01	2.71
	(.41)	(.55)
Capacity	3.39	1.99
	(.12)	(.06)
Cap. util. rate	-2.08	-2.48
	(1.23)	(.40)
$\bar{R}^2$	.98	.96
DW	1.38	.60
Sargan test (χ^2) (b)	12.90	14.30
Chow test ($\chi^2(1)$)	1.99	.01
Sample period	1968-91	1971-91

Legend: Standard Errors in parenthesis. X: manufacturing exports.

Notes: (a) relative prices measured as the ratio of export price to CPI.
(b) with ten (eight) degrees of freedom for Morocco (Tunisia).

The Export Demand Equation

The specification of the export demand equation is fairly standard. Export demand was assumed to be a function of international demand and competitors' prices. In turn, international demand was measured as a weighted average of the real imports of the main trade partners of Morocco and Tunisia, with weights reflecting the relative importance of each trade

3/ Kiviet, Jan F., (1985), "Model Selection Test Procedures in a Single Equation of a Dynamic Simultaneous System and Their Defects in Small Samples." Journal of Econometrics, 28, 327-62.

partner. As far as prices are concerned, a distinction was introduced between competition with developed countries and competition with other developing countries. The former was measured by a weighted average of manufacturing export prices of Morocco's and Tunisia's main trade partners. Developing countries competitors were assumed to be located mainly in the Mediterranean area and defined to include Turkey, Portugal and Greece, in addition to Morocco and Tunisia. Formally, this set-up can be justified by appealing to a separability assumption where consumers in importing countries determine first the aggregate level of manufacturing imports and then allocate such total among the competing sources of foreign supply. The estimating equation reads:

$$\ln X = b_0 + b_1 \ln YW + b_2 \ln p^s + b_3 \ln p^n + b_4 \ln p^z + b_5 \ln YW(-1) \qquad \text{(A5)}$$

$$+ b_6 \ln p^s(-1) + b_7 p^n(-1) + b_8 \ln p^z(-1) + b_9 \ln X(-1)$$

where YW denotes world demand and p^n and p^s represent the price of developed and developing competitors respectively. The equation can be reparametrised to test for short-run and long-run homogeneity in prices.

Equation A4 was estimated for both Morocco and Tunisia. Starting from equation A4, a model selection procedure was followed whereby the variables with contribution to the equation not significantly different from zero were eliminated. The final estimated equations are reported in Table A2. For both countries the hypothesis that the long-run elasticity of export demand with respect to international demand was equal to one could not be rejected. The restriction was accepted at fairly comfortable levels of significance. Price factors appear to have played a crucial role in determining the evolution of manufacturing exports in both countries. The short-run elasticity was estimated to be equal to .46 in Morocco and 1.5 in Tunisia. The long-run elasticities are equal to 2.73 and 8.8 for Morocco and Tunisia, respectively. The statistical properties of the two equations are more than satisfactory. The Sargan test does not provide any indication that the (overidentifying) instruments are correlated with the error term, while the Chow test, in its instrumental variable version, indicates that the equation is stable.

Table A2: THE EXPORT DEMAND EQUATION

Dep. Var.: $\Delta \ln X(t)$	Morocco	Tunisia (a)
Constant	3.94	-7.23
	(1.86)	(1.82)
ln YW	.17	.17
	(.05)	(.04)
$\ln (p^x/p^s)$	-.23	-1.50
	(.13)	(.39)
$\ln (p^x/p^n)$	-.23 (b)	—
$\ln p^n - \ln p^n (-1)$	-1.38	-1.53
	(.26)	(.41)
ln X(-1)	.83 (b)	.83 (b)
$\bar{R}^2$	.65	.75
DW	2.25	2.06
Sargan test (χ^2) (c)	6.33	12.4
Chow test ($\chi^2(1)$)	.41	.10
Sample period	1971-91	1971-91

Legend: Standard errors in parenthesis. X: manufacturing exports, YW: international demand, p^x: export prices, p^n: price of Northern competitors, p^s: price of Southern competitors.

Notes: (a) A dummy variable for 1974 was also introduced in the equation.
(b) constrained coefficient.
(c) with six (seven) degrees of freedom for Morocco (Tunisia).

Simulating the Determinants of Export Growth

The export demand equation includes some dynamic elements. Some care must be taken in decomposing the contribution of different factors to export growth. Suppose in general that export can be described by the following equation:

$$X_t = Z_t\alpha + X_{t-1}\beta + \epsilon_t \qquad \text{(A4)}$$

where X denotes exports (or its log) and Z denotes the determinants of exports. Abstracting from the stochastic term, export growth is then equal to:

$$X_t - X_{t-1} = (Z_t - Z_{t-1})\alpha + (X_{t-1} - X_{t-2})\beta$$

After repeated substitution of the previous equation, it can be easily shown that cumulated export growth after three years is equal to:

$$X_{t+3} - X_t = \alpha[(Z_{t+3} - Z_{t+2}) + (1+\beta)(Z_{t+2} - Z_{t+1}) +$$

$$+ (1+\beta+\beta^2)(Z_{t+1} - Z_t)] + (\beta+\beta^2+\beta^3)(X_t - X_{t-1})$$

This is the basis for the simulation exercise.

INTERNATIONAL COMPARISONS OF COST COMPETITIVENESS

INTRODUCTION

1. The aim of this annex is to compare indicators of cost competitiveness in Morocco, Tunisia and in a sample of countries identified as current or potential competitors in the European market. Competitiveness is broadly defined as the capacity to *"sustain the country participation in the international markets, being able to meet the standards of efficiency of the rest of the world as to the utilization of factor of production and the quality of products"*.[1] The two main indicators of such a concept of competitiveness are the price and the quality of products.

2. Analytically, if prices track costs closely, they can be decomposed in the following identity:[2]

Price = ULC*R*(1/e)

where ULC= Unit Labor Cost = Labor cost*reciprocal of labor productivity; R=profit margin; e= nominal exchange rate.[3] In addition to unit labor costs, this Annex provides an analysis of the costs and availability of factors (such as energy and transport) that are likely to affect the overall cost competitiveness of exports and some partial estimates of the evolution of quality in the textile and clothing sectors.

3. The sample of countries includes: (i) China, Indonesia, Philippines, Malaysia and Thailand, the new Asian countries that during the 1980s managed to increase rapidly their share in the European market and are competing with Morocco and Tunisia in the textile and clothing

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1/ Joao Paulo dos Reis Velloso: "International Competitiveness and the Creation of an Enabling Environment"; in International Competitiveness Edited by Irfan ul Haque; EDI Seminar Series, 1991.

2/ See Hopper A. and Larin K.:"International Comparison of Labor cost in Manufacturing", International Finance Discussion Paper August 1988; Hickman B.:"International Productivity and Competitiveness" OUP 1992; Maciejewski E. : "Real effective exchange rates indices", IMF Staff Paper, 1983..

3/ This decomposition relies on the assumption that prices of raw material inputs, being freely tradable, are governed by the law of one price and that the incidence of other costs is similar across competitor countries. Therefore, ULC provide a measure of profitability in the tradable sector (see L. Lipschite and D.M. MacDonald "Real exchange rate and competitiveness", IMF Working Paper, March 1991).

sectors. Their importance in the European market may further increase as MFA quotas are progressively removed; (ii) Portugal and Greece, two countries with an industrial structure very similar to that of Morocco and Tunisia, relatively cheap labor, and a large share of textile and clothing in the manufacturing value added and in total exports. Although these countries are slowly moving to less labor intensive products, they are still powerful competitors in the textile and clothing sector; (iii) Eastern European countries, enjoying the same advantages of Morocco and Tunisia, proximity to Europe, cheap and well trained labor force, are becoming serious competitors. Finally, among the Southern Mediterranean countries, Turkey has been chosen as the most successful country in penetrating the EC market.

I. PRICE COMPETITIVENESS IN THE MANUFACTURING SECTOR

4. **Aggregate measures of labor market competitiveness.** Table I.1 shows the ratio of the average wage in the manufacturing sector to GDP per capita (its evolution during the period 1975 and 1990 is in Table I.2).[4] Morocco displays, together with the Philippines and Turkey, the highest value of this ratio. Tunisia presents a slightly lower value but still higher than the majority of the countries listed in the sample. Morocco and Tunisia, together with Turkey, also have the highest ratio of non wage costs to GDP per capita.

5. **Real wages.** Table I.3 shows the dynamics of real wages in national currency (nominal wages per employee deflated by the consumer price index) during the period 1985-1991: real wages decreased in Morocco, Tunisia, and only slightly in Greece while recording an upward trend in all the other countries.

6. **Productivity.** Table I.4 examines the evolution of productivity (real value added in national currency per employee) from 1985 to 1991. It shows the relatively poor performance of both Morocco and Tunisia. The index of real value added per employee increases only slightly in the two Maghreb countries and substantially in all the other countries (except Hungary and Malaysia).

7. **Unit labor costs.** Table I.5 reports the share of wages in the value added of the manufacturing sector while Table I.6 presents an estimate of the unit labor cost calculated in

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4/ Provided that GDP per capita is a good proxy for the opportunity cost of labor, this ratio gives an indication of the return of labor in manufacturing relative to its return economy-wide. Since this ratio is also affected by the relative weight of the agricultural sector in the economy (because the earnings in agriculture are usually lower than earnings in the industrial sector), the share of agriculture in GDP is also presented in the table. A high value of this ratio may be interpreted as a signal of a distortion in the labor market. This can be the result of government policies such as a high level of the minimum wage; lack of flexibility in the labor market (because of legislation making difficult to lay off employees); and/or high non wage labor cost.

national currency. This indicator is calculated as the share of labor cost (that is wages plus contributions to the social security system) per unit of value added. The figures show wide differences in unit labor costs levels across countries. During 1985-1991, the index of unit labor costs (Table 1.7) decreased relatively more in Morocco and Tunisia than in other countries. On the other hand, Tables I.3 and I.4 suggest that this outcome was achieved through a combination of slow productivity growth and falling real wages whereas countries such as Turkey, Thailand and the Philippines were able to combine real wages and real productivity growth; in addition, the level of unit labor costs, although decreasing, is relatively higher in Morocco and Tunisia than in other countries.

8. **Real exchange rates.** The real exchange rate index[5] (Table I.8) shows a generalized depreciation of national currencies against the ECU (except for Portugal) but at a quite different pace across countries. Asian countries and China recorded the sharpest rate of depreciation between 1985 and 1991. The analysis of bilateral real exchange rates (Tables I.9 and I.10) suggest that the Moroccan and Tunisian currencies depreciated in real terms only against the Greek and Portuguese currencies.

9. **Wages in ECU.** Data from Tables I.11 and I.12 indicate that in Morocco and Tunisia the decline in real wages (measured in national currencies), was not sufficient to improve competitiveness (measured in ECU) vis-à-vis the Asian countries. In fact, despite higher wages, Malaysia, Thailand, Indonesia, Philippines and China maintained or increased their competitive edge through a more substantial exchange rate devaluation.

10. **Unit labor costs in ECU.** Table I. 13 shows unit labor costs in ECU. Between 1985 and 1990 Morocco improved its price competitiveness against Greece, Portugal, Hungary and Turkey.[6] However, it lost ground against the Asian countries. Tunisia's competitiveness improved more than in Morocco but lagged behind China, Malaysia and Indonesia. Interestingly, China, Indonesia and Malaysia were the best performers both in terms of price competitiveness and of growth in the export share in the European market (Tables I.14 and I.15).

5/ The ECU was chosen as the common currency. The real exchange rate has been calculated dividing the nominal exchange rate (unit of national currency per ECU) by the ratio of national to european consumer prices.

6/ But only because a sudden increase of this indicator in Turkey in 1990 due to the fact that the currency devaluation did not keep the pace with the strong inflationary process taking place in this country.

II. PRICE COMPETITIVENESS IN THE TEXTILE, CLOTHING AND FOOTWEAR INDUSTRY

11. The textile, clothing and footwear sector (TCF) has a crucial role in the process of industrialization of developing countries. Textile (ISIC 321) and wearing apparel (ISIC 322) are the two most important sub-sectors of the TCF in all the countries in the sample, accounting for more than 80% of the sector's value added (Table II.1). Between 1985 and 1990 clothing became by far the most important sub-sector in most countries. This because the garment sector is much more labor intensive than spinning and weaving (and so more suitable for developing countries). Moreover, the starting of production in the garment sector needs only 10-20% of the capital per worker needed for starting production in spinning or weaving. As shown in Table II.1 the gap in value added per worker (a measure that reflects the capital labor ratio) among the two sub-sectors is generally wide. In the last 15 years the TCF industry in Morocco and Tunisia concentrated on garment manufacturing, with close tiers to EEC through offshore plants, joint venture and sub-contractors. The characteristics of the industry are: (a) the large use of unskilled labor (abundant in Morocco and Tunisia and scarce in Europe); (b) low invested capital; (c) close proximity to final markets; and (d) privileged access to the European market as granted in the 1976 Association Agreements.

12. **Real wages.** During 1985 and 1990 real wages, measured in national currency (Table II.2), declined relatively more in Morocco, than in any other countries. They increased slightly in Turkey, Portugal, Malaysia and China, and more significantly in Thailand, the Philippines and Indonesia.

13. **Productivity.** On the productivity side, the Moroccan performance (together with Hungary) was the worst in the sample (Table II.3). Tunisia performed moderately well. The Asian countries and Turkey experienced significant increases in productivity.

14. **Unit labor costs.** Between 1985 and 1990 unit labor costs, measured in national currency,[7] (Table II.5) decreased in most countries. But only in Morocco and Hungary this was the outcome of lower real wages. In Tunisia instead the growth in productivity allowed a moderate decrease in unit labor costs. Yet, because of a gap in productivity, the share of wages in the value added of both Morocco and Tunisia remains relatively higher (Table II.4) than in the other countries.

15. **Labor costs in ECU.** Table II.6 shows the evolution of annual wages costs in the textile, clothing and footwear sector in ECU.[8] Tables II.7 and II.8 present the ratio between labor cost in the two Maghreb countries and the remaining countries in the sample. Two

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7/ Calculated in nominal terms.

8/ Calculated deflating the nominal wage in Ecu by the EEC consumer price index.

considerations emerge: first, Morocco and Tunisia face competition from countries, such as Thailand and Malaysia, which have lower wage levels, measured in ECU; second, these countries depreciated their currencies, vis-à-vis the ECU, more substantially than Morocco and Tunisia.

16. **Unit labor costs in ECU.** The index of unit labor costs in Ecu (Table II.9) indicates that during the 1985-91 period, Indonesia, Malaysia, the Philippines, and China were the best performers in terms of price competitiveness. Tunisia also did well but not Morocco, because of a low productivity. Looking at the evolution of the share in the EEC imports of textile and clothing (Tables II.10 and II.11) it appears that Indonesia, China and, to a lesser extent, Malaysia, translated this increase in competitiveness in an actual expansion of market shares.[9] Indonesia, for example, reached the same share in the EC imports of TCF achieved by Morocco and Tunisia although starting from a much lower level. Morocco and Tunisia performed satisfactorily, yet they appear vulnerable to the competition from very low labor cost countries.

17. **Quality.** The quality of products is extremely important in a competitive market such as the TCF. Upgrading production is a key strategy in countries that, reaching higher level of development, tend to lose their previous cost advantages. Unfortunately quality is not easy to measure and compare. A rough measure of "quality" is given by the Unit values[10] (calculated dividing the value for the quantity of imports). In Tables II.12 and II.13 unit values are calculated for imports in the EC and France of two garment products.[11] The data show that during the 1980s Morocco and Tunisia maintained the quality level of their products; but China

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9/ Although the sample showed in Table II.8 represents only around 20% of EEC imports,it must be taken into consideration that more than 50% of textile and clothing imports is intra-EEC trade. The negative export performance of the Philippines is explained by the sharp decrease in competitiveness experienced by this country in the first half of the 1980s.

10/ The use of unit value as a proxy for the products' quality is linked to the assumption that product differentiation is reflected in price differentiation, namely that a higher quality product sells at a higher price. As an approximation of price levels, unit value ought to be interpreted carefully for two main reason: first of all changes in unit value can be consequent to changes in the composition of the flow of trade. On the other hand as long as the higher price reveals a higher value added per physical unit the changing composition does not compromise the broad meaning of the indicator. Second, movement in unit value can stem simply from price movement. Restricting the comparison only to countries that have increased their share of clothing export in the EEC market and taking the relative unit value (that is dividing the nominal unit value to the world's unit value of EEC imports) should make this effect negligible.

11/ The SITIC commodity 8411 (textile clothes) represents 70% and 80% of the EEC clothing import from Morocco and Tunisia respectively. The commodity 84111 represents almost 30% and 50% of France clothing imports from both countries.

and Indonesia[12] improved very rapidly and are now able to produce in the same quality range occupied by the two Maghreb countries. Within Europe, Portugal and Greece shifted to higher unit value products.

III. ENERGY AND TRANSPORTATION COSTS

18. Energy and transportation costs are perhaps the two most important items (after labor) in the cost structure of the manufacturing sector. Energy prices vary widely from country to country because of different tax policies. Energy subsidization or heavy taxation can affect not only the final price of products but also influence the choice of production techniques.

19. The effects of transport (and insurance) costs, like that of tariffs and non tariffs barriers, can significantly increase costs. Table III.1 shows that in Morocco the price of energy paid by the industrial sector is, on average, higher than in other countries. For gasoline, heavy fuel and electricity, the Moroccan industry pays, respectively, 51%, 54% and 47% more than what is paid on average in OECD countries. On the contrary, Tunisian prices of energy are in line with those of others countries. The higher cost of energy in Morocco is largely the result of a Government policy aimed at capturing the spread between domestic and international prices. To evaluate the importance of the higher energy costs for the competitivity of the national industry it would be necessary to estimate the share of energy costs in the total input costs (or in the manufacturing costs) of each industrial process. As an approximation, the weight of the electricity cost in the input cost will be estimated for the whole manufacturing sector and then for the textile sector.

20. Table III.2 shows the average electricity consumption per employee in the manufacturing sector. Although the electricity consumption per employee in Morocco in 1989 was half the consumption in Hungary and less than 1/4 the consumption in Greece and Turkey, the estimated electricity bill (as a share of input costs) was only slightly lower than in Turkey and Hungary and higher than in Greece (Table III.3).[13] To assess the loss of competitiveness caused by the higher electricity costs in Morocco, the electricity consumption in the manufacturing sector has been calculated at both the average OECD price and the domestic price; the difference between the two evaluations[14] represents almost 1% of the input cost in the

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12/ The comparison with these two countries is particularly significant because of their much lower labor cost.

13/ The cost of electricity was estimated multiplying the average consumption for the average tariff. The ratio of this value to input costs give us the share of the electricity expenditure.

14/ At the average 1990 OECD price, the power consumption per employee in 1990 would have been 416.47 US dollars, and 613.45 US dollars if calculated at 1990 domestic tariffs. The input costs of the manufacturing sector in 1990 are estimated in 744.13 millions of dirhams. The difference between

manufacturing sector. The same calculation applied to the textile sector yields an excess cost of 1.15% of the input cost. Thus, what at first could be considered a small difference has on the contrary a non negligible impact on the value added: a decrease of 1% in the input costs would increase by almost 3% the value added and it would result in a 2% increase in competitiveness.[15]

21. A more specific estimate of the impact of high electricity tariffs on manufacturing costs can be made using data from the International Textile Manufactures Federation. A recent study reproduces the cost structure of two standard productions of the textile sector in several countries: as shown in Table III.4, in the spinning process the share of power cost in the total manufactured costs ranges from 3% in USA to 7% in Germany. In Brazil and India, this share is 4% and 5%. As no data are available for Morocco, we assume, for simplicity, that the structure of the spinning process in Morocco is similar to that of Brazil. The items in which the manufactured costs are broken down and then evaluated at the Moroccan prices. In spite of its obvious simplification, this exercise suggests the lack of competitiveness of Moroccan textile products, due to the large share (8%) of energy costs.

22. **Transport costs.** Two methodologies are usually employed to assess transport cost: The first is based on the comparison of the f.o.b. (free on board) with the c.i.f. (cost-insurance freight) value of exports. The ratio of the c.i.f. to the f.o.b. value provides an indicator of the ad valorem incidence of transport and insurance costs on the value of trade.[16] There are two drawbacks to this method: (a) discrepancies, among countries, in the way the goods are registered can produce poorly consistent estimate; (b) nominal ad valorem freight rate for two countries, for the same product, can differ because of different unit prices even if charges are identical. Thus, ad valorem freight rates reflect movements in the monetary price of exports as well as in the freight rates.

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estimated electricity costs at 1990 tariffs (2218 mill. of Dh; calculated multipliying the total electricity consumption in manufacturing, 2329.9 mill. of Kw, to the average tariff, 0.952 Dh per kw) and at OECD prices (1421 mill. Dh) is 797 mill. Dh. Subtracting this value from the input costs and calculating the value added (V.A. = Output - Input) we obtain an estimate of the value added after removing these excess costs.

15/ Notice that these estimates take as reference the OECD average tariffs which are often higher than LDCs tariffs (for example in the sample of countries included in this study only Philippines, Morocco, Turkey and Portugal show higher electricity tariffs than the OECD average).

16/ The formula used to calculate the ad valorem freight and insurance costs for the product i exported from the country j is as follows:
$f_{ij} = (V_c/V_f) - 1$
where V_c is the c.i.f and V_f the f.o.b value of exports (Cfr. A. Yeats 1989).

23. The second methodology is based on the transport related items reported in the current account part of the balance of payment. Here, freight and insurance costs are under the voice "shipment"; the item "total transport" also includes various forms of transport costs (as passengers, port services etc.). Consequently two indicators of the weight of transport costs in the value of trade can be calculated: first, the ratio of the absolute sum of "shipment" (credit plus debit) to the absolute sum of merchandise export and import, i.e., the "nominal shipment rate". Adding to "shipment" the other transport costs, the second measure, i.e., the "nominal transport rate" is obtained. The main limitation of this methodology resides in the lack of homogeneity in the way transactions are recorded. Thus, these measures cannot provide an exact indication of "how much" the transport costs differ among countries: however, they can show a hierarchy that reflects an "ordinal" measure of transport costs.

24. Table III.7 shows the incidence of transportation costs in the total trade (import and export) of Morocco and Tunisia and in France and other countries using the cif/fob methodology. Although these figures must be assessed with caution, it appears that on average the two Maghreb countries have freight and insurance costs well above international standards. The nominal shipment rate and the nominal transportation rate are then calculated in Tables III.8 and III.9. The results confirm the previous estimates: transportation costs are the highest in the two Maghreb countries and in Thailand.

25. An assessment of the excessive burden that transport and insurance costs put on the productive sector can be calculated using ad valorem excess costs as estimated in a recent study (see "Maghreb Transport and Trade Facilitation Study", op. cit.).[17] For textile and clothing exports, this study estimates ad valorem excess costs as high as 0.1% for Morocco and 0.4% for Tunisia (excluding the excess costs paid on the imported raw material). This translates into an estimated excess costs for textile exporters of eight millions dollars and one million dollars respectively. Otherwise said, 1.5% of the total value added of the TCF sector in Tunisia is lost in transport excess cost. The estimated increase in export benefits, assuming the elimination of transport related distortion, would be 2% in Tunisia and 1% in Morocco.

CONCLUSIONS

26. The analysis carried out in this Annex has highlighted some important cost disadvantages of Morocco and Tunisia relative to a sample of countries that compete in the European market. In recent years, price competitiveness has been improving in both countries, but not as much as in most competitors, in particular the Asian challengers; this was due not so much to real wages increases, but to the slow growth in productivity; and to the sharp rate of

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17/ The ad valorem excess cost related to total import is 2.05% for Morocco and 1.13% for Tunisia. For total exports is 0.34 for Morocco and 1.24 for Tunisia. The value on total imports plus exports is 1.36 for Morocco and 1.17 for Tunisia.

depreciation of Asian currencies relative to the ECU. Finally, energy costs in Morocco and transport costs in both Morocco and Tunisia add a substantial burden to the price of their exports and therefore lower competitiveness.

APPENDIX: SOURCES OF INFORMATION

Wages, value added and output data are from the UNIDO, the United Nations Industrial database. They are based on the national annual surveys of the manufacturing sector carried out by the statistical offices in member countries. The size of the enterprises included in each national survey is reported in Table A1. These data cover only the urban formal sector and not the informal sector.[1] Data on wages and employees include payments in cash or kind made to all personnel engaged directly or indirectly in the production (that is managerial, technical, supervisory, clerical staff and skilled and unskilled workers). The payments include (unless otherwise specified): (a) direct wages and salaries; (b) remuneration for time not worked; (c) bonuses and gratuities; (d) housing allowances and family allowances paid directly by the employer; and (e) payments in kind. Excluded are employers' contributions paid to social security funds, pensions and insurance schemes, as well as the benefits received by the employees under these scheme and severance and termination payments. As the number of hours worked are not specified, the average annual wage (the ratio of total wages to total employees) reflect both the wage rate and the length of time worked. Labor costs are calculated as wages plus the contribution to the above mentioned funds (social security etc.). This portion of the labor cost is estimated using the information from the Price Waterhouse publications (Doing Business in...).[2]

LABOR COSTS AND PRODUCTIVITY: METHODOLOGICAL NOTES

The unit labor cost is a widely used indicator of price competitiveness. It expresses the share of labor cost in output:

$$ULC = (W/H)/(Q/H)$$

where (W/H) is the hourly compensation and (Q/H) is the output per hour. Since hourly wages and output per hour were not available for some of the countries in the sample, annual wages and annual value added per employee were used as proxies. To compare UCL across countries, the following identity was used:

$$ULC = E*(W/L)/(Q/L)$$

where E is the exchange rate. Thus, nominal labor costs have been converted in a common currency. They have then been divided by an indicator of productivity expressed in local currency. This ratio provides an indication of relative unit labor costs but it cannot be used to compare unit labor cost levels.[3]

1/ Moreover the smallest units (under 10 or 20 employee) are often not included in the surveys.

2/ The estimates of the labor cost were calculated applying the percentage charges for social security payroll taxes and other funds paid by the employer to the total wages. Therefore this value can overestimate the labor cost for two reason: some employee may not be eligible for this kind of benefit (or the employer may evade the contributions); the percentage of the employer contribution is generally computed on the base salary and not on the average wage paid (namely it does not include bonuses and other kind of payment that are instead included in our wages data). On the other hand, for lack of reliable information, other costs associated with employment (for example training and hiring costs) cannot be considered.

3/ Comparisons of unit labor costs in national currency implicitly assumes the use of the current exchange rate for the two components of the ratio. Yet, as pointed out by Hopper and Larin (1988), a more correct way to compare unit labor cost levels in a common currency would imply measuring the productivity component with Purchasing Power Parity values instead of the current exchange rate; this would avoid errors induced by differences in the price of the output components for the reference year. Since this further calculation is beyond the scope of this study, the unit labor cost levels are reported as shares calculated in national currency.

Table I.1 - Labor Market Competitiveness

	Ratio of manufacturing wage to GDP per capita	Ratio of manufacturing labor cost to GDP per capita	Ratio of minimum wage to GDP per capita	Ratio of non wage cost to GDP per capita	Share of agriculture in GDP 1991
Morocco	3.02	3.49	1.75	0.47	19
Tunisia*	2.42	2.97	0.77	0.47	18
Turkey	2.71	3.27	0.53	0.57	18
Hungary	0.93	1.33	-	0.40	10
Greece	1.88	2.35	0.85	0.40	17
Portugal	1.06	1.33	0.62	0.26	-
Indonesia*	1.79	1.82	0.49	0.04	19
Malaysia	1.23	1.39		0.16	-
Philippines*	3.13	3.19	1.59	0.06	21
Thailand*	1.68	1.75	0.71	0.06	12
China	1.42	1.45	-	-	27

*Annual minimum wages estimated multiplying the daily minimum wage by 288 (24 working days*12 months)

Source: Manufacturing wages - Unido, "Yearbook of Industrial Statistics"; GDP per capita - IMF "International Financial Statistics; Minimum wages - Turkey, Greece & Portugal: Price Waterhouse "Doing Business in .." 1992; Morocco: Ministry of Industry; Tunisia: Institut National de la Statistique; Thailand: "Thailand Key Economic Indicators", Bank of Thailand, March 1993; Philippines: 1991 Philippines Statistical Yearbook; non wage cost - "Doing Business in.." (Price Waterhouse) Business in... "(Price waterhouse)

Table I.2 - Manufacturing Wage to GDP per capita

	1975	1980	1985	1990
Morocco*	5.00	4.91	4.41	3.02
Tunisia	n.a.	n.a.	2.57	2.42

*1976 instead of 1975.

Source: Wages - for Morocco Unido Industrial Statistics and Ministry of Industry (Annual Industrial Survey); for Tunisia, Ministry of Planning; GDP & population - IMF Statistics various issues

Table I.3 - Manufacturing sector - Real wage per employee in local currency (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	93	92	96	102	92	106	104	99	111	108	108
1987	92	91	102	103	88	113	104	97	133	119	107
1988	91	91	95	115	93	115	108	94	142	128	113
1989	87	96	119	117	100	116	113	95	146	137	109
1990	93	97	144	112	100	119	120	96	155	139	118
1991	-	93	140	101	99	-	122	100	174	-	124

Note: wages are deflated by the IMF consumer price index
Source: wage data are from the UNIDO Industrial Statistics database except for Morocco (Ministry of Commerce and Industry) and Tunisia (Ministry of Planning).

Table I.4 - Manufacturing sector - Real value added per employee in local currency (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	104	96	132	103	106	107	102	106	126	109	100
1987	112	102	137	114	109	122	95	104	116	115	110
1988	118	104	149	117	118	125	83	102	126	115	122
1989	99	106	151	134	123	126	95	108	129	125	130
1990	106	111	167	117	126	131	110	106	141	130	129
1991	-	110	173	107	129	-	116	113	171	-	138

Note: value added is deflated by the wholesale price index (IMF financial statistics) except for Malaysia (producer price) and China (manufacturing deflator from World Bank Tables 1993)
Source: data for value added are from the Unido Industrial Statistics database except for Morocco (Ministry of Commerce and Industry) and Tunisia (Ministry of Planning); staff estimates

Table I.5 - Manufacturing sector - Wages as percentage of value added in nominal value

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia*	Malaysia	Philippines*	Thailand	China
1985	0.41	0.60	0.21	0.33	0.42	0.39	0.19	0.30	0.23	0.27	0.15
1986	0.37	0.56	0.16	0.34	0.39	0.39	0.19	0.30	0.20	0.28	0.16
1987	0.34	0.52	0.17	0.33	0.39	0.36	0.21	0.29	0.25	0.28	0.15
1988	0.32	0.49	0.15	0.39	0.39	0.36	0.22	0.27	0.24	0.28	0.16
1989	0.36	0.51	0.19	0.36	0.40	0.36	0.20	0.26	0.24	0.28	0.16
1990	0.36	0.49	0.22	0.41	0.40	0.36	0.19	0.27	0.24	0.28	0.17
1991	-	0.48	0.22	0.43	0.40	-	0.19	0.27	0.24	-	0.17

*Wages include employers' contribution to pension and heall insurance schemes - *Include severance pay.
Source: data from UNIDO Industrial Statistics except for Tunisia (Ministry of planning) and for Morocco Ministry of Industry (Annual Industrial Survey).
Staff estimates

Table I.6 - Manufacturing sector - Unit labor cost in nominal value

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	0.47	0.73	0.26	0.48	0.53	0.49	0.19	0.34	0.23	0.28	n.a.
1986	0.42	0.69	0.19	0.49	0.49	0.48	0.19	0.34	0.21	0.29	n.a.
1987	0.40	0.64	0.21	0.47	0.48	0.45	0.21	0.33	0.26	0.29	n.a.
1988	0.37	0.61	0.19	0.56	0.48	0.45	0.22	0.31	0.24	0.30	n.a.
1989	0.41	0.62	0.23	0.51	0.50	0.45	0.20	0.29	0.25	0.29	n.a.
1990	0.42	0.60	0.26	0.59	0.50	0.45	0.19	0.31	0.25	0.29	n.a.
1991	-	0.59	0.26	0.61	0.50	-	0.19	0.31	0.24	-	n.a.

Source: data for wages and value added are from UNIDO Industrial Statistics except for Tunisia (Ministry of planning) and for Morocco Ministry of Industry (Annual Industrial Survey); data for non wage labor costs are from Price Waterhouse: "Doing Business in...". Staff estimates.

Table I.7 - Manufacturing sector - Unit labor cost in nominal value (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China*
1985	100	100	100	100	100	100	100	100	100	100	100
1986	90	94	75	102	92	99	100	100	90	102	111
1987	84	87	81	98	91	93	113	97	112	103	106
1988	78	83	73	117	91	93	118	91	105	105	110
1989	87	85	90	106	94	92	107	87	107	103	109
1990	89	82	103	123	94	92	100	91	108	103	119
1991	-	81	103	128	94	-	100	90	105	-	115

* The index is based on the ratio of wages (and not labor costs) to value added per employee.

Table I.8 - Index of real exchange rate: national currency vs ECU

	1985	1986	1987	1988	1989	1990	1991
Morocco	100	90	83	82	83	75	75
Tunisia	100	83	71	68	68	64	64
Turkey	100	78	69	70	78	84	85
Hungary	100	86	75	77	78	77	89
Greece	100	91	91	93	94	95	97
Portugal	100	96	92	93	97	100	107
Indonesia	100	69	48	48	50	42	42
Malaysia	100	73	62	57	58	49	49
Philippines	100	69	59	58	65	54	56
Thailand	100	79	68	68	72	63	65
China	100	68	57	65	76	50	46

Note: An increase in the index means appreciation. The real exchange rate has been calculated dividing the nominal exchange rate (national currency/Ecu) by the ratio of national to European consumer price index.
Source: data are from IMF financial statistics, various issues. Staff calculation

Table I.9 - Morocco - Bilateral real exchange rates

	1985	1986	1987	1988	1989	1990	1991
Morocco vs:							
Tunisia	100	108	111	113	116	108	107
Turkey	100	119	128	132	120	105	108
Hungary	100	107	116	126	129	122	109
Greece	100	104	101	102	103	93	93
Portugal	100	94	91	88	86	75	70
Indonesia	100	136	172	169	168	160	155
Malaysia	100	132	137	141	141	150	150
Philippines	100	133	135	129	121	132	133
Thailand	100	116	118	114	111	115	108
China	100	133	154	150	143	191	204

Note: the deflators used in these two tables are wholesale or producer price indices

Table I.10 - Tunisia - Bilateral real exchange rates

	1985	1986	1987	1988	1989	1990	1991
Tunisia vs:							
Morocco	100	95	90	89	86	92	94
Turkey	100	112	116	117	104	97	102
Hungary	100	101	105	112	111	113	102
Greece	100	96	91	90	89	86	87
Portugal	100	87	77	74	70	64	60
Indonesia	100	128	155	150	145	148	146
Malaysia	100	125	123	125	121	138	140
Philippines	100	126	122	115	105	122	124
Thailand	100	110	106	101	96	106	101
China	100	126	139	133	123	177	191

Table I.11 - Manufacturing Sector: Real Wages in ECU (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	84	76	75	88	84	101	71	72	76	85	74
1987	76	64	70	78	80	104	50	60	78	81	61
1988	75	62	67	88	86	107	52	54	83	87	73
1989	72	65	94	92	94	113	56	55	95	98	82
1990	70	62	120	87	95	119	50	47	84	87	59
1991	-	60	119	90	96	-	52	49	97	-	57

Source: Data are from UNIDO Industrial Statistics except for Morocco (Ministry of Industry) and Tunisia (Ministry of Plan)
The index is calculated deflating the nominal wage with the EEC consumer price index.

Table I.12 - Ratio between the index of real wages in ECU and the index of real wages in national currency

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	90	83	78	86	91	96	69	73	69	79	68
1987	83	71	69	75	91	92	48	62	59	68	57
1988	82	68	70	77	93	93	48	57	58	68	65
1989	83	68	78	78	94	97	50	58	65	72	76
1990	75	64	84	77	95	100	42	49	54	63	50
1991	-	64	85	89	97	-	42	49	56	-	46

See Tables I.11 and I.13

Table I.13 - Manufacturing Sector - Unit labor cost in ECU (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	83	82	59	88	82	98	72	70	63	81	77
1987	73	68	55	73	79	91	57	62	72	76	59
1988	70	66	49	83	81	95	69	58	73	83	66
1989	84	71	72	80	89	104	68	60	86	91	74
1990	80	69	89	91	93	112	56	55	73	82	56
1991	-	70	89	109	96	-	58	56	73	-	53

Table I.14 - EC imports of manufactured products - Average annual rate of growth in nominal value

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China	World
1985-91	25.6	21.6	30.3	23.5	14.5	24.4	47.3	30.5	19.4	39.2	43.4	18.5

Source: data are from Comtrade (U. N.)

Table I.15 - EC imports of manufactured products - Share in the sample

	1985	1986	1987	1988	1989	1990	1991	1992
Morocco	5.03	4.84	4.89	4.89	4.75	4.89	4.15	4.12
Tunisia	5.61	5.49	5.00	4.46	4.35	4.34	3.82	4.04
Turkey	10.15	11.55	12.38	11.95	12.56	12.15	10.47	10.50
Hungary	7.39	6.89	6.04	5.49	5.14	5.37	5.53	5.94
Greece	12.65	12.94	11.59	9.91	8.70	7.19	6.01	5.32
Portugal	25.29	25.40	24.07	22.99	22.83	22.93	19.71	18.80
Indonesia	2.41	2.47	2.80	3.49	3.60	4.32	5.19	5.92
Malaysia	7.56	6.14	5.93	6.49	6.84	6.95	7.86	8.22
Philippines	4.16	3.43	3.53	3.25	2.79	2.45	2.54	2.47
Thailand	5.05	5.46	5.89	6.79	7.14	7.17	7.76	7.32
China	14.70	15.39	17.89	20.29	21.29	22.24	26.96	27.34
Sample	100	100	100	100	100	100	100	100

Source: Data are from Comtrade (UN)

Table: II.1 - Structure of the textile, clothing & footwear sector (ISIC 32)*

	Share in the value added of the manufacturing sector (in %)		Share in the value added of the Textile, Clothing and Footwear sector of: Textile (ISIC 321)		Wearing Apparel (ISIC 322)		Value added per employee Ratio of clothing to textile (in %)	
	1985	1990	1985	1990	1985	1990	1985	1990
Morocco	22	25	69	52	18	37	52	59
Tunisia	24	32	33	31	53	53	61	65
Turkey	14	14	86	75	10	22	69	79
Hungary	11	9	54	51	26	31	75	75
Greece	24	21	58	52	29	38	80	98
Portugal	24	20	69	68	18	17	77	81
Indonesia	10	14	82	79	13	15	66	66
Malaysia	5	6	55	51	42	48	66	55
Philippines	7	10	48	37	46	59	71	92
Thailand	21	25	49	47	39	41	78	85
China (a)	12	13	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

*In the ISIC classification (International Standard Industrial Classification) the textile sector (n.32) include at three digit disaggregation level: Textiles (321), Wearing Apparel (322), Leather (323), and Footwear (324).
(a) Only Textiles (321) and Leather (323)

Source: Data from UNIDO Industrial Statistics and Tunisian Ministry of Planning.

Table II.2 - Textile, clothing & footwear sector - Real wages per employee in national currency (1985=100)

	Morocco	Tunisia (a)	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China (b)
1985	100	100	100	100	100	100	100	100	100	100	100
1986	84	97	100	101	94	108	103	100	111	109	111
1987	82	105	104	101	88	118	101	102	126	124	104
1988	79	110	101	106	92	111	108	99	135	135	106
1989	88	109	111	106	98	109	112	102	143	135	103
1990	90	105	100	100	96	108	119	111	145	133	112
1991	-	96	108	88	91	113	121	112	160	-	117

(a) Only Textile (321) and leather products (322)
(b) Only Textile (321) and leather products (322)

Source: Data from Unido industrial statistics; staff calculation

Table II.3 - Textile, clothing & footwear - Real value added per employee (1985=100)

	Morocco	Tunisia (a)	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China (b)
1985	100	100	100	100	100	100	100	100	100	100	100
1986	102	101	112	99	110	103	132	130	122	109	101
1987	102	111	145	104	112	102	117	139	128	121	107
1988	91	114	139	107	108	95	109	129	183	126	116
1989	95	115	136	111	106	94	150	130	195	126	127
1990	94	112	130	99	113	92	152	138	206	126	129
1991	89	105	145	87	111	100	154	142	237	-	126

(a) Only Textile (321) and leather products (322)
(b) Only Textile (321) and leather products (322)

Source: Data from Unido industrial statistics; staff calculation

Table II.4 - Textile, clothing and footwear sector - Unit labor cost

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	0.78	0.72	0.34	0.62	0.51	0.53	0.29	0.59	0.71	0.37	n.a.
1986	0.69	0.71	0.32	0.66	0.46	0.51	0.24	0.49	0.66	0.38	n.a.
1987	0.66	0.70	0.27	0.65	0.45	0.56	0.26	0.45	0.68	0.38	n.a.
1988	0.72	0.69	0.29	0.74	0.50	0.55	0.29	0.45	0.49	0.38	n.a.
1989	0.75	0.69	0.32	0.73	0.55	0.55	0.22	0.46	0.49	0.38	n.a.
1990	0.76	0.69	0.32	0.81	0.52	0.55	0.21	0.48	0.49	0.38	n.a.
1991	n.a.	0.68	0.33	0.85	0.51	0.55	0.21	0.47	0.49		n.a.

Source: Data from Unido Industrial Statistics; staff calculation

Table II.5 - Textile, clothing and footwear sector - Unit labor cost (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	88	99	92	105	90	97	81	82	93	102	112
1987	85	98	78	104	88	105	89	76	96	102	105
1988	93	97	83	119	99	105	99	76	69	102	110
1989	96	96	92	117	107	104	75	77	69	102	105
1990	97	96	92	130	102	104	72	80	69	103	112
1991	n.a.	95	95	137	101	103	72	79	69	n.a	120

Source: Index calculated from real wages divided by real value added

Table II.6 - Textile, clothing & footwear sector - Index of real wages per employee in ECU (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	76	81	78	87	86	103	71	72	76	86	76
1987	69	74	72	76	80	108	49	63	74	85	59
1988	63	75	71	81	85	102	52	57	79	92	69
1989	60	74	87	83	92	106	56	59	93	97	78
1990	58	68	84	77	91	108	50	54	79	84	55
1991	-	62	92	79	88	122	51	55	89	-	53

Source: Data from UNIDO Industrial Statistics; staff calculation

Table II.7 - Labor cost in Ecu: ratio to Morocco

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	125	123	88	302	128	33	121	51	66	18
1986	100	129	122	97	329	167	29	111	49	72	17
1987	100	127	120	91	329	188	22	103	51	77	14
1988	100	131	122	100	359	183	24	96	56	85	17
1989	100	108	125	85	323	158	21	84	55	76	16
1990	100	102	124	82	323	166	20	79	48	67	12

Source: Data from Unido Industrial Statistics; staff calculation

Table II.8 - Labor cost in Ecu: ratio toTunisia

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	80	100	98	70	241	102	26	96	41	53	14
1986	77	100	76	75	254	129	23	86	38	56	13
1987	79	100	70	71	259	147	17	81	40	60	11
1988	76	100	70	76	274	139	18	73	43	65	13
1989	92	100	85	78	298	146	20	77	51	70	15
1990	98	100	82	80	316	163	19	78	47	66	11
1991	n.a.	100	90	89	333	200	22	86	58	n.a.	13

Source: Data from Unido Industrial Statistics; staff calculation

Table II.9 - Textile, clothing and footwear sector - Unit labor cost in Ecu (1985=100)

	Morocco	Tunisia	Turkey	Hungary	Greece	Portugal	Indonesia	Malaysia	Philippines	Thailand	China
1985	100	100	100	100	100	100	100	100	100	100	100
1986	77	83	72	91	81	96	55	58	65	89	77
1987	72	72	53	78	76	103	45	48	62	90	59
1988	79	73	57	84	88	107	53	49	48	102	65
1989	91	75	74	87	101	118	43	53	55	113	71
1990	88	74	80	96	99	127	40	48	47	103	53
1991	n.a.	76	82	117	102	144	43	50	49	n.a.	55

Source: Data from Unido Industrial Statistics; staff calculation

Table II.10 - Share in the total EC imports of Textile and Clothing

	1985	1986	1987	1988	1989	1990	1991	1992
Morocco	0.87	0.98	1.15	1.21	1.36	1.55	1.54	1.63
Tunisia	1.03	1.11	1.12	1.07	1.19	1.41	1.42	1.62
Turkey	2.59	2.88	3.53	3.55	3.95	4.06	4.01	4.22
Hungary	0.58	0.59	0.58	0.56	0.56	0.62	0.69	0.81
Greece	2.56	2.80	2.75	2.33	2.21	1.98	1.88	1.83
Portugal	3.02	3.00	3.14	3.23	3.53	3.73	3.76	3.84
Indonesia	0.22	0.23	0.38	0.56	0.74	0.98	1.34	1.60
Malaysia	0.28	0.27	0.35	0.40	0.52	0.57	0.70	0.74
Philippines	0.30	0.29	0.39	0.43	0.44	0.40	0.47	0.43
Thailand	0.74	0.79	0.93	1.11	1.11	1.13	1.23	1.15
China	2.26	2.30	2.71	2.98	3.20	3.61	4.91	4.86
Sample	14.45	15.25	17.02	17.45	18.81	20.04	21.96	22.73

Source: Data are from Comtrade (U.N.)

Table II.11 - EC Imports of Textile and Clothing - Share in the total of the sample

	1985	1986	1987	1988	1989	1990	1991	1992
Morocco	6.05	6.45	6.75	6.95	7.24	7.75	7.02	7.17
Tunisia	7.10	7.30	6.59	6.15	6.34	7.04	6.45	7.12
Turkey	17.96	18.88	20.72	20.37	21.01	20.28	18.28	18.58
Hungary	3.98	3.84	3.40	3.22	2.97	3.10	3.14	3.56
Greece	17.73	18.38	16.16	13.34	11.74	9.88	8.54	8.04
Portugal	20.88	19.67	18.42	18.52	18.75	18.61	17.14	16.90
Indonesia	1.51	1.53	2.21	3.23	3.96	4.87	6.10	7.05
Malaysia	1.91	1.77	2.08	2.30	2.75	2.85	3.17	3.26
Philippines	2.10	1.92	2.29	2.47	2.32	1.97	2.15	1.89
Thailand	5.11	5.21	5.46	6.36	5.89	5.63	5.62	5.04
China	15.66	15.05	15.92	17.09	17.03	18.03	22.39	21.39
Sample	100	100	100	100	100	100	100	100

Source: Data are from Comtrade (U.N.)

Table II.12 - EEC imports - Unit value - Commodity 841.1 (Textile clothes)
Ratio to the average world value

	Morocco	Tunisia	Indonesia	China	Group 1*	Group 2**	World
1980-82	0.66	0.72	0.55	0.53	0.92	0.77	1.00
1983-85	0.67	0.72	0.53	0.55	0.94	0.74	1.00
1986-88	0.77	0.78	0.44	0.56	1.11	0.62	1.00
1989-92	0.74	0.71	0.66	0.74	1.21	0.73	1.00

*Greece and Portugal
**Indonesia, Malaysia, Philippines, Thailand

Source: Data are from Comtrade (U.N.)

Table II.13 - France imports - Unit value - Comm. 84111 (mens outwear not knitted) - ratio to the average world value

	Morocco	Tunisia	Indonesia	China	Portugal	Group 2*	World
1980-82	0.70	0.71	0.49	0.60	1.15	0.80	1.00
1983-85	0.68	0.68	0.38	0.64	1.08	0.79	1.00
1986-88	0.72	0.77	0.47	0.66	1.31	0.73	1.00
1989-92	0.72	0.76	0.83	0.72	1.52	0.86	1.00

* Indonesia, Malaysia, Philippines, Thailand

Source: Data are from Comtrade (U.N.)

Table III.1: Prices of Energy for Industrial Use in current US dollars - 1992					Electrical utilities finance	
	Gasoline (litre)	Heavy fuel oil (ton)	Electricity (kw/h)	Water (cubic meter)	Average revenue (1) 1991	Average financial cost (2) 1991
Morocco*	0.80	215.7	0. 080	0.33	8.3	n.a.
Tunisia*	0.59	118.1	0.055	0.52	5.8	5.9
Turkey	0.75	164.6	0.093	n.a.	6.0	n.a.
Hungary	0.85	117.0	0.060	n.a.	5.6	n.a.
Greece	0.82	162.8	0.065*	n.a.	n.a.	n.a.
Portugal	1.08	196.4	0.145	n.a.	n.a.	n.a.
Indonesia	0.27	108.4	0.050	n.a.	5.8	5.2
Malaysia	n.a.	n.a.	0.070*	0.52	6.7	5.2
Philippines	n.a.	n.a.	0.085*	0.24	5.2	5.4
Thailand	0.37	139.8	0.040*	0.21	4.9	4.3
China	n.a.	n.a.	0.022	n.a.	2.2	n.a.
Taiwan	0.68	153.1	0.087	n.a.	n.a.	n.a.
India	0.65	163.5	0.066	0.58	4.6	4.8
Poland	0.50	75.0	0.035	n.a.	3.4	n.a.
Spain	0.94	129.6	n.a.	n.a.	n.a.	n.a.
OECD	0.53	140.3	0.074*	n.a.		

*1991

Sources: International Energy Agency "Energy prices and taxes" (1993), Annuaire Statistique du Maroc; Société Tunisienne de L'Electricité et du Gaz (STEG);Thailand - Key economic indicators (Bank of Thailand) March 1993; Malaysia - Ministry of Mines and Energy - Power Sector Statistics for Developing Countries (World Bank 1994) and Review of electricity tariffs in Developing Countries during the 1980's; Energy Series Paper n. 32, Nov. 1990

(1) Average revenue = total sales of a given utility divided by the total sales of GWh of that utility expressed in US cents/KWh.
(2) Average financial costs = total operating costs + interest on debt and minus depreciation divided by total sales in in GWh of that utility expressed in Us cents/KWh

Table III.2 - Electricity consumed per employee (KWh) in manufacturing sector

	Morocco	Tunisia	Turkey	Hungary	Greece	Indonesia	Malaysia	Philippines
1986	6424	6322	20478	11118	22353	8238	8848	7827
1987	6166	6894	20125	11589	20691	9516	8489	11252
1988	5766	7028	19934	11796	22929	8483	9110	7770
1989	5416	7224	24120	12231	22620	6242	9255	-
1990	5628	7343	-	11685	-	-	-	-

Source: estimated with data from UNIDO Industrial statistics various issues, Annuaire Statistique du Maroc and Annuaire Statistique de la Tunisie

Table III.3 - Electricity purchased in manufacturing sector as percentage of input

	Morocco	Tunisia	Turkey	Hungary	Greece	Indonesia	Malaysia	Philippines
1986	3.41	-	5.99	3.70	3.19	-	-	-
1987	3.44	2.18	4.58	3.99	2.71	-	-	1.89
1988	3.57	2.02	4.01	4.32	2.95	4.12	11.74	2.50
1989	3.40	1.79	4.49	4.02	2.46	3.96	10.02	1.88
1990	3.61	1.51	-	3.87	-	2.71	-	-

Note: Estimated multiplying the average price per kwh for the average electricity consumption in manifacturing sector and dividing by the value of input.

Source: Data are from Unido Industrial Statistics, Annuaire Statistique du Maroc, International Energy Agency (OCSE) and STEG - Direction de l'Electricité de la Tunisie.

Table III.4 - Total Yarn cost in 1991

Cost element US $ per kg of yarn	Brazil	Germany	India	Japan	Korea	USA	Morocco
Waste	**0.17**	**0.16**	**0.13**	**0.19**	**0.19**	**0.16**	**0.17**
%	5	5	5	5	6	5	5
Labor	**0.13**	**0.35**	**0.08**	**0.54**	**0.1**	**0.48**	**0.15**
%	4	10	3	14	4	14	4
Power	**0.13**	**0.23**	**0.15**	**0.24**	**0.13**	**0.11**	**0.26**
%	4	7	5	6	4	3	8
Auxiliary material	**0.13**	**0.09**	**0.11**	**0.09**	**0.09**	**0.08**	**0.13**
%	4	3	4	3	3	3	4
Capital (depreciacion and Interest)	**1.08**	**0.54**	**0.94**	**0.8**	**0.59**	**0.81**	**0.84**
%	31	16	33	21	19	24	25
Raw material	**1.79**	**2.05**	**1.4**	**1.94**	**1.97**	**1.72**	**1.79**
%	52	59	50	51	64	51	54
Total yarn costs	**3.43**	**3.45**	**2.81**	**3.80**	**3.07**	**3.36**	**3.34**
	100	100	100	100	100	100	100

Source: International Textile Manufactures Federation - International Production Cost Comparison in Spinning/Weaving and staff estimates

Table III.5 - Trade with world: incidence of transportation costs

	1988	1989	1990	1991	Average
Morocco	1.8	9.2	6.4	10.0	**7.1**
Tunisia	6.5	7.0	7.9	5.7	**8.7**
France	2.1	1.0	2.0	2.7	**6.8**
EEC	1.5	1.2	1.4	1.9	**2.0**
Industrialized countries	3.6	3.6	3.4	3.5	**3.5**
Developing countries	3.5	4.5	4.5	4.2	**4.2**
World	3.0	3.2	3.2	3.5	**3.2**

Source: Maghreb Transport and Trade Facilitation Study (World Bank)

Table III.6 - Nominal shipment rates

	1985	1986	1987	1988	1989	1990	1991	1992
Morocco	6.98	6.97	6.89	6.92	6.93	6.80	6.67	7.10
Tunisia	5.81	5.11	4.72	4.55	3.40	3.29	3.37	3.18
Turkey	4.59	4.77	4.28	4.59	4.47	4.24	4.59	4.32
Greece	3.70	3.73	3.82	3.92	4.00	4.26	4.02	4.07
Hungary	2.53	2.48	2.62	2.61	2.64	1.51	1.03	0.76
Portugal	4.52	4.45	4.58	4.63	4.45	4.42	4.53	4.37
Indonesia	4.46	4.90	4.55	4.51	4.51	4.85	4.99	4.92
Malaysia	5.44	5.97	5.67	5.60	5.07	4.66	4.49	4.14
Philippines	5.21	4.76	4.51	4.65	4.98	4.93	4.65	4.50
Thailand	9.28	8.41	7.93	8.06	7.84	7.74	7.66	7.62
China	3.41	3.08	3.49	3.72	4.30	4.68		
Average	**4.66**	**4.55**	**4.42**	**4.48**	**4.38**	**4.28**	**4.18**	**4.09**

Table III.7 - Nominal transportation rates

	1985	1986	1987	1988	1989	1990	1991	1992
Morocco	8.61	8.62	8.56	8.53	8.47	8.32	8.00	9.06
Tunisia	12.30	11.01	11.58	10.76	8.94	8.56	8.65	9.49
Turkey	5.97	6.04	5.59	5.50	5.89	5.11	5.66	5.56
Greece	6.69	6.50	6.16	6.64	6.00	6.46	6.55	7.58
Hungary	2.53	2.48	2.62	2.61	2.64	1.51	1.03	0.76
Portugal	8.30	8.22	7.66	7.47	6.99	7.45	7.51	6.88
Indonesia	5.63	6.11	5.55	5.58	5.89	6.42	6.38	6.42
Malaysia	8.76	9.85	9.39	9.06	8.17	7.63	7.38	7.24
Philippines	5.98	5.74	5.89	6.32	6.30	6.22	6.38	6.19
Thailand	10.97	9.79	9.95	10.21	9.86	10.02	9.72	10.08
China	2.52	2.64	2.51	2.85	3.19	3.56	2.50	3.43
Average	**6.52**	**6.42**	**6.29**	**6.29**	**6.03**	**5.94**	**5.81**	**6.06**

Source: Balance of payments data are from IMF

THE EVOLUTION OF COMPARATIVE ADVANTAGES: INTERNATIONAL COMPARISONS

This Annex presents the evolution of comparative advantages in:

Morocco
Tunisia
Spain
Portugal
Turkey
Hungary
Poland
Czechoslovakia
Malaysia
Thailand
Philippines

during the period 1970-1991. The methodology is explained in Chapter IV. The sectoral breakdown is performed at the two-digit level of the Standard International Trade Classification. Products appear in a different order from country to country: for each country those in which there is the largest comparative advantage in 1991 are classified first.

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES & DISADVANTAGES
MOROCCO

Commodity (SITC rev1 2-digits)	1970	1980	1987	1991
CLOTHING	1.3	7.3	28.7	34.2
FISH AND PREPARATIONS	8.7	7.5	22.9	27.0
FRUIT AND VEGETABLES	52.8	33.2	24.6	24.8
FERTILIZERS MANUFACTURED	0.9	0.4	5.3	15.2
CHEM ELEMENTS,COMPOUNDS	-2.9	9.7	22.3	13.1
CRUDE FERTLZR,MINRLS NES	33.4	48.7	14.0	9.9
FOOTWEAR	0.3	1.6	2.8	3.6
TRAVEL GOODS,HANDBAGS	0.8	0.7	0.8	0.7
WOOD,CORK MANUFACTRS NES	0.5	0.8	0.6	0.6
PERFUME,CLEANING ETC PRD	0.5	-0.0	1.1	0.5
MISC FOOD PREPARATIONS	-0.1	-0.1	-0.0	0.2
BEVERAGES	2.3	0.6	0.2	0.1
LEATHER,DRESSED FUR,ETC	1.2	0.3	-0.4	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
COAL,PETROLEUM ETC CHEMS	-0.0	-0.0	-0.0	-0.0
ANIMAL FEEDING STUFF	2.0	0.3	-0.2	-0.0
EXPLOSIVES,PYROTECH PROD	-0.2	-0.1	-0.1	-0.0
PLUMBG,HEATNG,LGHTNG EQU	-0.8	-0.5	-0.2	-0.1
GOODS NOT CLASSD BY KIND	0.0	0.0	-0.0	-0.1
MEAT AND PREPARATIONS	0.4	0.3	-0.3	-0.2
FURNITURE	-0.0	0.0	-0.0	-0.3
OTHER FOOD	-0.3	-0.4	-0.6	-0.3
NON-FERROUS METALS	-1.1	1.3	0.7	-0.3
RUBBER MANUFACTURES NES	-1.6	-0.9	-0.6	-0.8
MEDICINAL ETC PRODUCTS	-2.1	-1.7	-1.7	-1.6
DAIRY PRODUCTS AND EGGS	-2.9	-2.2	-1.3	-1.8
SUGAR AND PREPS HONEY	-5.0	-5.7	-1.7	-1.8
NONMETAL MINERAL MFS NES	-1.0	-1.0	-1.8	-1.8
DYES,TANNING,COLOUR PROD	-1.3	-1.1	-1.7	-1.9
COFFEE TEA COCOA SPICES	-5.6	-3.0	-3.9	-2.1
INSTRMNTS,WATCHES,CLOCKS	-1.2	-1.4	-1.8	-2.1
TOBACCO AND MFRS	-0.9	-1.3	-2.0	-2.1
ANIMAL,VEGETABLE OIL,FAT	-3.2	-2.3	-3.4	-2.7
TEXTILE YARN,FABRIC ETC	-3.9	3.1	0.5	-2.7
CHEMICALS NES	-1.7	-1.9	-3.0	-3.0
PAPER,PAPERBOARD AND MFR	-1.8	-2.3	-2.9	-3.1
MISC MANUFCTRD GOODS NES	-1.7	-1.7	-2.5	-3.2
OTHER RAW MATERIALS EXCL. FERT	7.3	3.2	-3.7	-3.8
PLASTIC MATERIALS ETC	-2.3	-3.0	-4.0	-4.5
METAL MANUFACTURES NES	-4.2	-2.8	-2.8	-4.6
ELECTRICAL MACHINERY	-9.9	-5.6	-6.8	-5.6
CEREALS AND PREPARATIONS	-2.7	-12.4	-8.6	-6.0
IRON AND STEEL	-11.5	-9.4	-9.4	-10.4
TRANSPORT EQUIPMENT	-13.8	-7.3	-11.6	-14.2
MINERAL FUELS ETC	-7.3	-30.4	-26.5	-22.8
MACHINERY,NON-ELECTRIC	-21.2	-20.5	-21.2	-26.1
TOTAL TOTAL TRADE	0.0	0.0	0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
TUNISIA

Commodity	1970	1980	1987	1991
CLOTHING	0.3	40.3	59.1	95.5
ANIMAL,VEGETABLE OIL,FAT	5.6	4.0	5.6	21.5
FERTILIZERS MANUFACTURED	13.7	21.3	30.5	20.9
MINERAL FUELS ETC	35.5	99.1	33.4	19.9
CHEM ELEMENTS,COMPOUNDS	-2.2	12.6	8.0	13.2
FISH AND PREPARATIONS	2.3	3.9	9.9	7.2
FRUIT AND VEGETABLES	12.1	4.0	8.6	6.6
NONMETAL MINERAL MFS NES	-0.6	-7.3	1.1	4.6
FOOTWEAR	0.0	1.0	0.9	3.0
LEATHER,DRESSED FUR,ETC	-0.6	1.0	1.5	1.8
BEVERAGES	7.9	1.0	1.0	1.7
TRAVEL GOODS,HANDBAGS	-0.1	0.6	0.8	1.0
PERFUME,CLEANING ETC PRD	0.5	-0.4	-0.3	0.6
FURNITURE	-0.3	-0.3	-0.1	0.3
TOBACCO AND MFRS	-0.5	-1.2	-1.6	0.1
WOOD,CORK MANUFACTRS NES	-0.2	-0.6	-0.5	0.0
GOODS NOT CLASSD BY KIND	0.1	-0.2	-0.0	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
COAL,PETROLEUM ETC CHEMS	0.0	-0.0	-0.0	-0.0
OTHER FOOD	1.1	-1.4	-0.2	-0.0
EXPLOSIVES,PYROTECH PROD	-0.3	-0.7	-0.2	-0.1
MISC FOOD PREPARATIONS	-0.4	-0.5	-0.7	-0.4
MEAT AND PREPARATIONS	0.7	-0.7	-1.8	-0.7
PLUMBG,HEATNG,LGHTNG EQU	-0.3	-0.8	-0.5	-0.7
COFFEE TEA COCOA SPICES	-2.7	-1.6	-1.9	-1.1
ANIMAL FEEDING STUFF	3.1	-1.9	-0.8	-1.7
RUBBER MANUFACTURES NES	-1.9	-3.2	-1.9	-1.7
DAIRY PRODUCTS AND EGGS	-3.0	-3.7	-2.7	-2.0
DYES,TANNING,COLOUR PROD	-1.0	-1.7	-2.5	-2.2
METAL MANUFACTURES NES	-4.2	-9.7	-4.6	-2.3
SUGAR AND PREPS HONEY	-4.7	-6.3	-3.0	-2.7
INSTRMNTS,WATCHES,CLOCKS	-2.4	-3.0	-2.5	-2.9
CHEMICALS NES	-1.5	-2.3	-3.2	-3.1
NON-FERROUS METALS	3.6	-0.5	-2.8	-3.2
PAPER,PAPERBOARD AND MFR	-3.4	-3.4	-4.4	-3.5
CEREALS AND PREPARATIONS	-17.9	-15.8	-10.1	-5.4
MISC MANUFCTRD GOODS NES	-2.2	-3.1	-3.6	-6.1
ELECTRICAL MACHINERY	-11.1	-10.3	-5.4	-6.3
PLASTIC MATERIALS ETC	-1.7	-5.9	-6.3	-6.4
CRUDE FERTLZR,MINRLS NES	15.7	-1.8	-8.0	-7.4
MEDICINAL ETC PRODUCTS	-4.0	-5.4	-8.2	-8.2
OTHER RAW MATERIALS EXCL. FERT	4.2	-8.4	-10.1	-9.2
IRON AND STEEL	-1.0	-17.8	-8.9	-9.9
TRANSPORT EQUIPMENT	-8.2	-19.2	-8.7	-15.4
TEXTILE YARN,FABRIC ETC	-8.4	-13.9	-26.1	-43.5
MACHINERY,NON-ELECTRIC	-21.7	-35.9	-28.5	-51.6
TOTAL TOTAL TRADE	0.3	0.0	-0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
SPAIN

Commodity	1970	1980	1987	1991
TRANSPORT EQUIPMENT	4.0	10.7	9.1	16.6
FRUIT AND VEGETABLES	15.1	10.9	12.1	9.3
IRON AND STEEL	-4.6	8.4	3.7	3.2
FOOTWEAR	3.6	3.1	4.1	2.5
NONMETAL MINERAL MFS NES	0.3	4.0	2.6	2.2
ANIMAL,VEGETABLE OIL,FAT	4.4	2.3	1.7	2.2
RUBBER MANUFACTURES NES	1.3	2.4	1.7	1.2
BEVERAGES	2.5	2.4	1.5	1.0
GOODS NOT CLASSD BY KIND	0.1	0.1	0.2	0.7
FURNITURE	0.6	0.7	1.0	0.4
LEATHER,DRESSED FUR,ETC	0.6	1.6	1.6	0.4
METAL MANUFACTURES NES	1.7	3.5	1.4	0.4
COAL,PETROLEUM ETC CHEMS	-0.1	0.3	0.4	0.2
NON-FERROUS METALS	-0.9	2.6	0.5	0.2
DYES,TANNING,COLOUR PROD	-0.3	0.0	0.0	0.1
WOOD,CORK MANUFACTRS NES	1.1	1.1	0.6	0.1
PLUMBG,HEATNG,LGHTNG EQU	0.5	0.4	0.4	0.1
SUGAR AND PREPS HONEY	-0.2	0.1	0.4	0.0
EXPLOSIVES,PYROTECH PROD	0.0	0.0	0.0	0.0
TEXTILE YARN,FABRIC ETC	1.8	2.8	1.1	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
CRUDE FERTLZR,MINRLS NES	-0.2	-0.5	-0.1	-0.0
MEDICINAL ETC PRODUCTS	-0.7	0.2	0.3	-0.0
TRAVEL GOODS,HANDBAGS	0.3	0.2	0.2	-0.1
PERFUME,CLEANING ETC PRD	0.1	0.4	0.2	-0.1
FERTILIZERS MANUFACTURED	0.1	0.3	-0.0	-0.1
CEREALS AND PREPARATIONS	-1.5	-2.9	0.5	-0.3
MISC FOOD PREPARATIONS	0.1	0.1	-0.0	-0.3
COFFEE TEA COCOA SPICES	-1.5	-1.8	-1.0	-0.4
OTHER FOOD	0.1	0.0	-0.3	-0.4
DAIRY PRODUCTS AND EGGS	-0.5	-0.2	-0.4	-0.4
TOBACCO AND MFRS	-1.0	-1.0	-0.8	-0.6
PLASTIC MATERIALS ETC	-1.0	0.1	-0.4	-0.6
MEAT AND PREPARATIONS	-1.1	-0.2	-0.6	-0.6
ANIMAL FEEDING STUFF	-0.3	0.0	-0.7	-1.0
CHEMICALS NES	-0.6	-0.3	-0.9	-1.0
CHEM ELEMENTS,COMPOUNDS	-2.0	-1.6	-1.9	-1.0
PAPER,PAPERBOARD AND MFR	-0.4	0.8	-0.0	-1.1
MISC MANUFCTRD GOODS NES	2.6	2.7	0.2	-1.3
CLOTHING	1.5	1.3	1.0	-2.1
FISH AND PREPARATIONS	2.9	0.1	-1.8	-2.3
INSTRMNTS,WATCHES,CLOCKS	-1.7	-2.2	-3.0	-3.1
OTHER RAW MATERIALS EXCL. FERT	-10.9	-10.4	-6.4	-3.6
ELECTRICAL MACHINERY	-1.1	-0.6	-4.1	-4.3
MACHINERY,NON-ELECTRIC	-8.3	0.0	-9.5	-7.3
MINERAL FUELS ETC	-6.5	-42.1	-14.3	-9.0
TOTAL TOTAL TRADE	-0.0	-0.0	0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
PORTUGAL

Commodity	1970	1980	1987	1991
CLOTHING	15.2	34.3	64.6	62.0
FOOTWEAR	2.4	7.9	21.7	22.6
WOOD,CORK MANUFACTRS NES	9.1	15.1	14.3	12.8
NONMETAL MINERAL MFS NES	2.7	8.2	8.0	10.0
BEVERAGES	14.0	13.1	9.6	7.2
OTHER RAW MATERIALS EXCL. FERT	2.2	2.7	3.0	6.6
TEXTILE YARN,FABRIC ETC	25.6	23.9	10.0	3.9
FURNITURE	0.1	0.7	0.6	1.4
COAL,PETROLEUM ETC CHEMS	-0.1	-0.1	0.8	1.0
DAIRY PRODUCTS AND EGGS	0.7	0.1	0.2	0.9
PAPER,PAPERBOARD AND MFR	-0.5	2.5	0.2	0.8
GOODS NOT CLASSD BY KIND	2.6	3.0	1.2	0.7
ANIMAL,VEGETABLE OIL,FAT	1.0	1.2	1.4	0.5
PLUMBG,HEATNG,LGHTNG EQU	0.2	0.1	0.2	0.4
CRUDE FERTLZR,MINRLS NES	1.4	-0.7	0.1	0.3
METAL MANUFACTURES NES	1.2	3.3	1.2	0.2
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
CHEMICALS NES	3.8	1.7	0.2	-0.1
EXPLOSIVES,PYROTECH PROD	0.2	0.7	-0.3	-0.1
TOBACCO AND MFRS	-1.0	-1.0	-0.5	-0.2
TRAVEL GOODS,HANDBAGS	0.1	0.0	-0.1	-0.2
OTHER FOOD	-0.1	-0.2	-0.7	-0.3
FERTILIZERS MANUFACTURED	0.9	1.6	-0.1	-0.3
MISC FOOD PREPARATIONS	0.3	0.1	-0.4	-0.4
ELECTRICAL MACHINERY	-3.9	0.9	-2.1	-1.1
RUBBER MANUFACTURES NES	0.7	-1.0	-1.5	-1.2
COFFEE TEA COCOA SPICES	-1.3	-1.3	-2.1	-1.3
FRUIT AND VEGETABLES	8.6	4.3	-0.3	-1.7
PERFUME,CLEANING ETC PRD	0.5	0.4	-1.1	-2.1
LEATHER,DRESSED FUR,ETC	-0.1	-0.2	-2.3	-2.2
MEDICINAL ETC PRODUCTS	-1.7	-2.2	-2.0	-2.3
PLASTIC MATERIALS ETC	-3.9	-6.8	-2.8	-2.4
SUGAR AND PREPS HONEY	-3.6	-3.0	-2.4	-2.4
MEAT AND PREPARATIONS	-0.8	-0.5	-1.9	-2.5
DYES,TANNING,COLOUR PROD	-1.5	-1.5	-2.7	-2.6
ANIMAL FEEDING STUFF	-1.2	-3.0	-2.6	-2.7
FISH AND PREPARATIONS	5.4	3.9	-4.4	-3.6
NON-FERROUS METALS	-5.3	-5.0	-4.8	-3.9
CHEM ELEMENTS,COMPOUNDS	-4.0	-5.6	-6.9	-4.0
MISC MANUFCTRD GOODS NES	-1.0	1.4	-3.1	-4.7
CEREALS AND PREPARATIONS	-6.9	-14.2	-3.9	-4.8
INSTRMNTS,WATCHES,CLOCKS	-2.6	-1.7	-3.9	-5.1
IRON AND STEEL	-8.3	-6.0	-7.3	-7.0
MINERAL FUELS ETC	-13.1	-46.7	-29.7	-21.2
TRANSPORT EQUIPMENT	-15.9	-6.4	-18.5	-22.3
MACHINERY,NON-ELECTRIC	-22.0	-23.9	-28.8	-28.5
TOTAL TOTAL TRADE	-0.0	-0.0	-0.0	-0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
TURKEY

Commodity	1970	1980	1987	1990
CLOTHING	0.4	3.3	37.8	39.3
FRUIT AND VEGETABLES	14.2	23.8	24.4	19.9
TEXTILE YARN,FABRIC ETC	1.3	7.9	17.9	12.4
IRON AND STEEL	-4.2	-2.6	-0.3	9.0
TOBACCO AND MFRS	7.5	5.9	3.2	2.9
NONMETAL MINERAL MFS NES	-0.2	1.5	1.0	2.5
CRUDE FERTLZR,MINRLS NES	1.3	3.3	2.9	2.2
OTHER FOOD	1.4	2.5	3.0	1.6
PERFUME,CLEANING ETC PRD	0.1	0.0	0.5	0.8
MISC FOOD PREPARATIONS	0.0	-0.0	0.7	0.8
FISH AND PREPARATIONS	0.6	0.9	1.9	0.7
COFFEE TEA COCOA SPICES	-0.0	0.5	0.3	0.7
TRAVEL GOODS,HANDBAGS	-0.0	-0.1	0.3	0.4
PLUMBG,HEATNG,LGHTNG EQU	-0.0	0.1	0.7	0.3
FOOTWEAR	0.0	0.0	0.4	0.3
MEAT AND PREPARATIONS	0.3	0.5	0.7	0.2
BEVERAGES	0.0	0.1	0.0	0.1
WOOD,CORK MANUFACTRS NES	-0.0	0.1	0.5	0.1
FURNITURE	-0.0	0.0	0.3	0.0
COAL,PETROLEUM ETC CHEMS	-0.0	0.5	0.0	0.0
DAIRY PRODUCTS AND EGGS	0.0	0.0	0.6	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
EXPLOSIVES,PYROTECH PROD	-0.0	-0.0	-0.1	-0.0
GOODS NOT CLASSD BY KIND	0.0	-0.0	0.4	-0.1
METAL MANUFACTURES NES	-1.5	-0.4	0.5	-0.1
RUBBER MANUFACTURES NES	-0.1	0.1	0.3	-0.2
ANIMAL FEEDING STUFF	2.1	-0.0	0.5	-0.3
ANIMAL,VEGETABLE OIL,FAT	-0.3	-1.0	-0.4	-0.4
LEATHER,DRESSED FUR,ETC	0.1	-0.0	-0.9	-0.7
PAPER,PAPERBOARD AND MFR	-0.8	-0.5	0.1	-0.8
NON-FERROUS METALS	-0.6	-0.3	-2.9	-0.8
FERTILIZERS MANUFACTURED	-2.0	-3.8	-1.4	-0.8
MEDICINAL ETC PRODUCTS	-0.8	-0.5	-1.4	-0.9
MISC MANUFCTRD GOODS NES	-0.3	0.2	-0.3	-1.3
PLASTIC MATERIALS ETC	-1.0	-1.1	-1.0	-1.4
CHEMICALS NES	-0.8	-1.0	-2.3	-1.6
SUGAR AND PREPS HONEY	0.5	-0.9	-0.0	-1.7
DYES,TANNING,COLOUR PROD	-0.8	-0.5	-2.0	-2.0
CEREALS AND PREPARATIONS	-3.4	2.6	0.4	-3.0
INSTRMNTS,WATCHES,CLOCKS	-0.9	-0.4	-2.5	-3.2
CHEM ELEMENTS,COMPOUNDS	-3.3	-3.5	-7.2	-4.1
OTHER RAW MATERIALS EXCL. FERT	18.1	8.7	-10.4	-5.0
ELECTRICAL MACHINERY	-4.4	-2.5	-7.8	-6.2
TRANSPORT EQUIPMENT	-5.5	-0.6	-4.8	-8.2
MACHINERY,NON-ELECTRIC	-12.9	-8.1	-18.7	-23.2
MINERAL FUELS ETC	-3.9	-34.7	-35.0	-28.0
TOTAL TOTAL TRADE	0.0	-0.0	-0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
HUNGARY

Commodity	1970	1980	1987	1990
MEAT AND PREPARATIONS	4.4	11.6	8.1	10.1
FRUIT AND VEGETABLES	8.4	5.5	4.9	4.5
IRON AND STEEL	0.0	0.9	0.0	2.8
MEDICINAL ETC PRODUCTS	6.8	3.8	3.4	2.6
CLOTHING	5.9	4.9	3.6	2.5
GOODS NOT CLASSD BY KIND	-0.1	1.2	1.7	2.5
NON-FERROUS METALS	-2.5	-1.8	-0.7	2.3
OTHER FOOD	6.3	5.0	2.6	2.0
CEREALS AND PREPARATIONS	2.8	3.1	2.1	1.4
ANIMAL,VEGETABLE OIL,FAT	0.2	1.2	1.1	1.3
DAIRY PRODUCTS AND EGGS	1.2	1.3	0.3	1.2
PLASTIC MATERIALS ETC	-2.1	-2.4	-0.2	1.1
FURNITURE	0.3	1.3	0.8	0.8
BEVERAGES	2.3	2.7	1.3	0.8
WOOD,CORK MANUFACTRS NES	-0.7	0.0	0.3	0.7
FOOTWEAR	4.0	2.7	1.7	0.6
RUBBER MANUFACTURES NES	-0.1	-0.0	0.2	0.5
FERTILIZERS MANUFACTURED	-2.4	-0.7	-0.6	0.4
TRAVEL GOODS,HANDBAGS	0.5	0.6	0.4	0.3
PLUMBG,HEATNG,LGHTNG EQU	0.1	-0.1	0.3	0.3
MISC FOOD PREPARATIONS	-0.1	0.1	0.1	0.2
LEATHER,DRESSED FUR,ETC	0.6	0.3	-0.3	0.1
FISH AND PREPARATIONS	-0.1	0.1	0.1	0.1
SUGAR AND PREPS HONEY	-0.0	0.8	0.3	0.0
OTHER RAW MATERIALS EXCL. FERT	-12.0	-5.6	-2.3	0.0
EXPLOSIVES,PYROTECH PROD	0.1	-0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
COAL,PETROLEUM ETC CHEMS	-0.1	0.0	0.0	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
TEXTILE YARN,FABRIC ETC	1.3	-0.3	-0.5	-0.1
TOBACCO AND MFRS	-0.1	-0.3	-0.2	-0.2
METAL MANUFACTURES NES	1.7	-0.5	-0.3	-0.3
NONMETAL MINERAL MFS NES	-2.4	-1.2	-0.6	-0.3
MISC MANUFCTRD GOODS NES	1.1	0.1	-0.8	-0.4
PERFUME,CLEANING ETC PRD	-0.0	-0.4	-0.3	-0.4
TRANSPORT EQUIPMENT	3.5	4.6	5.4	-0.5
CRUDE FERTLZR,MINRLS NES	-1.9	-2.1	-1.3	-0.6
INSTRMNTS,WATCHES,CLOCKS	1.0	1.3	2.0	-0.7
DYES,TANNING,COLOUR PROD	-0.5	-1.0	-0.8	-0.7
COFFEE TEA COCOA SPICES	-1.7	-3.7	-1.8	-0.9
ELECTRICAL MACHINERY	7.6	4.6	4.3	-1.3
PAPER,PAPERBOARD AND MFR	-3.4	-2.8	-2.0	-2.1
CHEM ELEMENTS,COMPOUNDS	-3.1	-2.5	-3.1	-2.6
ANIMAL FEEDING STUFF	-4.0	-3.7	-2.6	-2.7
CHEMICALS NES	-2.0	-4.0	-3.3	-3.3
MACHINERY,NON-ELECTRIC	-8.2	-4.3	-5.1	-8.9
MINERAL FUELS ETC	-12.5	-20.2	-18.4	-13.2
TOTAL TOTAL TRADE	-0.0	-0.0	-0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
POLAND

Commodity	1981	1987	1990
MACHINERY,NON-ELECTRIC	8.3	-0.8	-3.8
ELECTRICAL MACHINERY	3.1	0.4	-0.9
CLOTHING	3.0	0.8	0.4
NON-FERROUS METALS	2.8	1.8	2.8
TRANSPORT EQUIPMENT	2.7	0.9	1.1
OTHER BASIC MANUF	2.2	1.3	0.2
OTHER MACHINES	2.1	0.5	-0.7
TEXTILE YARN,FABRIC ETC	1.7	-0.1	-0.1
METAL MANUFACTURES NES	1.6	0.8	1.0
FOOTWEAR	1.6	0.7	0.5
CRUDE FERTLZR,MINRLS NES	1.3	0.7	0.5
OTHER FOOD	0.6	1.3	1.4
FURNITURE	0.5	0.6	0.7
DYES,TANNING,COLOUR PROD	0.5	-0.0	-0.1
FRUIT AND VEGETABLES	0.4	1.2	0.8
MEDICINAL ETC PRODUCTS	0.3	-0.5	-0.4
MISC MANUFCTRD GOODS NES	0.3	-0.5	-1.2
FISH AND PREPARATIONS	0.3	0.4	0.1
TRAVEL GOODS,HANDBAGS	0.3	0.1	0.0
PERFUME,CLEANING ETC PRD	0.2	-0.1	-0.1
MEAT AND PREPARATIONS	0.1	1.5	1.0
NONMETAL MINERAL MFS NES	0.1	0.1	0.4
GOODS NOT CLASSD BY KIND	0.1	3.0	2.6
OTHER CHEMICALS	0.0	-0.4	-0.1
PLUMBG,HEATNG,LGHTNG EQU	0.0	0.0	0.0
BEVERAGES	0.0	-0.3	-0.2
OTHER BEVERAGE	0.0	0.1	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0
EXPLOSIVES,PYROTECH PROD	0.0	0.0	0.0
COAL,PETROLEUM ETC CHEMS	0.0	0.0	0.0
OTHER MISCELLANEOUS MANUF	-0.0	0.0	-0.7
WOOD,CORK MANUFACTRS NES	-0.1	0.2	0.3
CHEM ELEMENTS,COMPOUNDS	-0.1	0.3	1.0
LEATHER,DRESSED FUR,ETC	-0.1	-0.2	-0.1
MISC FOOD PREPARATIONS	-0.2	0.0	-0.1
RUBBER MANUFACTURES NES	-0.3	-0.3	-0.0
INSTRMNTS,WATCHES,CLOCKS	-0.3	-0.6	-0.7
TOBACCO AND MFRS	-0.4	-0.2	-0.4
PAPER,PAPERBOARD AND MFR	-0.4	-0.2	-0.0
SUGAR AND PREPS HONEY	-0.5	0.1	0.3
ANIMAL,VEGETABLE OIL,FAT	-0.6	-0.2	-0.1
PLASTIC MATERIALS ETC	-0.7	-0.7	-0.2
CHEMICALS NES	-0.8	-0.8	-0.0
DAIRY PRODUCTS AND EGGS	-0.9	-0.0	0.3
COFFEE TEA COCOA SPICES	-1.3	-1.3	-0.6
FERTILIZERS MANUFACTURED	-1.4	-0.3	0.3
IRON AND STEEL	-1.5	-0.1	1.4
ANIMAL FEEDING STUFF	-2.2	-1.5	-0.4
OTHER RAW MATERIALS EXCL. FERT	-4.6	-2.4	-0.3
CEREALS AND PREPARATIONS	-7.8	-1.2	-0.1
MINERAL FUELS ETC	-10.2	-3.7	-5.7
TOTAL TOTAL TRADE	-0.0	-0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
CZECHOSLOVAKIA

Commodity	1972	1979	1986
MACHINERY,NON-ELECTRIC	10.1	16.4	25.4
TRANSPORT EQUIPMENT	11.7	12.7	20.5
IRON AND STEEL	8.1	11.7	9.2
FOOTWEAR	6.5	6.4	5.4
TEXTILE YARN,FABRIC ETC	3.2	3.8	5.3
NONMETAL MINERAL MFS NES	3.9	3.9	4.7
CLOTHING	1.9	3.1	4.1
FURNITURE	1.1	1.2	2.6
MISC MANUFCTRD GOODS NES	2.6	2.3	2.6
WOOD,CORK MANUFACTRS NES	-0.1	0.4	1.7
PLASTIC MATERIALS ETC	-1.5	0.9	1.1
DAIRY PRODUCTS AND EGGS	-0.1	0.5	0.9
DYES,TANNING,COLOUR PROD	0.6	0.3	0.9
TRAVEL GOODS,HANDBAGS	0.1	0.2	0.9
METAL MANUFACTURES NES	0.4	0.3	0.8
ELECTRICAL MACHINERY	4.5	-0.7	0.8
RUBBER MANUFACTURES NES	0.4	0.7	0.7
PLUMBG,HEATNG,LGHTNG EQU	-0.2	0.5	0.5
MEAT AND PREPARATIONS	-0.5	0.3	0.4
EXPLOSIVES,PYROTECH PROD	0.2	0.6	0.2
PAPER,PAPERBOARD AND MFR	0.0	0.3	0.1
BEVERAGES	-0.4	0.6	0.1
OTHER FOOD	-0.2	-0.1	0.1
OTHER CHEMICALS	-0.0	0.0	0.1
TOTAL TOTAL TRADE	-0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0
COAL,PETROLEUM ETC CHEMS	0.2	0.8	0.0
OTHERS NOT ESLSEWHER SPEC.	0.1	-0.1	0.0
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	-0.0
OTHER BASIC MANUF	0.0	0.0	-0.0
MEDICINAL ETC PRODUCTS	0.4	0.0	-0.1
LEATHER,DRESSED FUR,ETC	-0.1	-0.5	-0.1
MISC FOOD PREPARATIONS	-0.2	0.2	-0.1
CEREALS AND PREPARATIONS	-3.3	-4.0	-0.2
INSTRMNTS,WATCHES,CLOCKS	-0.1	-1.0	-0.2
PERFUME,CLEANING ETC PRD	-0.2	-0.3	-0.4
SUGAR AND PREPS HONEY	0.3	0.3	-0.5
ANIMAL,VEGETABLE OIL,FAT	-0.9	-0.7	-0.5
FISH AND PREPARATIONS	-1.2	-0.9	-0.7
CHEMICALS NES	-1.3	-2.3	-0.8
CHEM ELEMENTS,COMPOUNDS	-1.4	-2.4	-0.9
TOBACCO AND MFRS	-2.4	-1.4	-1.0
CRUDE FERTLZR,MINRLS NES	-2.4	-2.1	-1.3
ANIMAL FEEDING STUFF	-2.5	-2.1	-1.4
FERTILIZERS MANUFACTURED	-1.1	-1.0	-1.7
GOODS NOT CLASSD BY KIND	-0.1	-2.1	-2.3
COFFEE TEA COCOA SPICES	-1.4	-2.2	-2.3
FRUIT AND VEGETABLES	-3.4	-2.9	-3.3
NON-FERROUS METALS	-8.1	-7.2	-5.3
OTHER RAW MATERIALS EXCL. FERT	-12.7	-9.2	-8.0
MINERAL FUELS ETC	-10.7	-25.1	-58.0
TOTAL TOTAL TRADE	0.0	0.0	0.0

ANNEX IV

REVEALED COMPARATIVE ADVANTAGES
NEW ASIAN NICS (MALAYSIA + THAILAND + PHILIPINNES)

Commodity	1970	1980	1987	1991
CLOTHING	-0.6	7.9	18.9	34.0
MISC MANUFCTRD GOODS NES	-3.0	-0.3	2.7	17.2
OTHER RAW MATERIALS EXCL. FERT	87.5	66.1	35.0	17.0
FISH AND PREPARATIONS	0.9	5.5	9.0	15.1
ANIMAL,VEGETABLE OIL,FAT	11.0	23.0	14.5	14.2
FRUIT AND VEGETABLES	7.4	14.4	9.8	12.0
FOOTWEAR	0.0	1.4	2.2	6.3
WOOD,CORK MANUFACTRS NES	4.2	5.5	4.3	5.3
FURNITURE	-0.1	1.3	1.4	4.6
CEREALS AND PREPARATIONS	5.5	10.6	6.1	4.1
SUGAR AND PREPS HONEY	10.1	7.0	2.5	4.0
ELECTRICAL MACHINERY	-11.8	-8.8	-2.1	2.9
GOODS NOT CLASSD BY KIND	-1.8	-3.2	-16.2	2.8
MEAT AND PREPARATIONS	-0.7	-0.2	1.1	2.1
TRAVEL GOODS,HANDBAGS	-0.0	0.2	0.7	1.8
COFFEE TEA COCOA SPICES	0.6	1.8	3.8	1.7
RUBBER MANUFACTURES NES	-0.8	-0.4	0.5	1.3
OTHER FOOD	0.1	-0.2	0.2	0.5
MISC FOOD PREPARATIONS	-0.5	0.1	-0.1	0.4
MINERAL FUELS ETC	-13.7	-33.3	0.9	0.4
PLUMBG,HEATNG,LGHTNG EQU	-0.4	-0.2	-0.0	0.2
LEATHER,DRESSED FUR,ETC	-0.0	-0.1	0.9	0.1
TOBACCO AND MFRS	-0.5	-0.3	-0.8	0.1
OTHER MISCELLANEOUS MANUF	0.0	0.0	0.0	0.0
OTHER MACHINES	0.0	0.0	0.0	0.0
OTHER BASIC MANUF	0.0	0.0	0.0	0.0
OTHERS NOT ESLSEWHER SPEC.	0.0	0.0	0.0	0.0
OTHER BEVERAGE	0.0	0.0	0.0	0.0
OTHER CHEMICALS	0.0	0.0	0.0	0.0
EXPLOSIVES,PYROTECH PROD	-0.3	-0.4	-0.2	-0.1
COAL,PETROLEUM ETC CHEMS	-0.0	-0.1	-0.5	-0.1
ANIMAL FEEDING STUFF	-0.1	-0.4	-0.8	-0.5
BEVERAGES	-0.4	-0.7	-0.5	-0.8
CRUDE FERTLZR,MINRLS NES	-0.5	-1.2	-0.9	-1.0
PERFUME,CLEANING ETC PRD	-1.1	-1.2	-1.4	-1.0
DAIRY PRODUCTS AND EGGS	-4.0	-2.9	-2.5	-2.2
MEDICINAL ETC PRODUCTS	-3.5	-2.2	-2.7	-2.3
CHEMICALS NES	-3.4	-3.4	-3.0	-2.4
FERTILIZERS MANUFACTURED	-2.2	-5.0	-2.9	-2.5
DYES,TANNING,COLOUR PROD	-1.8	-1.8	-2.3	-2.5
TEXTILE YARN,FABRIC ETC	-8.1	0.2	-2.4	-3.4
INSTRMNTS,WATCHES,CLOCKS	-2.4	-2.9	-3.2	-3.6
NON-FERROUS METALS	20.6	18.2	0.1	-4.3
PAPER,PAPERBOARD AND MFR	-4.8	-3.7	-4.1	-4.4
METAL MANUFACTURES NES	-5.8	-4.7	-3.2	-4.8
NONMETAL MINERAL MFS NES	-1.3	-0.7	2.1	-5.2
PLASTIC MATERIALS ETC	-3.5	-4.6	-7.0	-7.9
CHEM ELEMENTS,COMPOUNDS	-4.2	-8.5	-10.7	-9.3
TRANSPORT EQUIPMENT	-20.9	-22.5	-9.6	-21.5
IRON AND STEEL	-13.4	-15.1	-13.0	-24.0
MACHINERY,NON-ELECTRIC	-32.1	-34.3	-26.7	-44.2
TOTAL TOTAL TRADE	-0.0	-0.0	0.0	0.0

HISTORICAL COMPARISONS OF FACTOR ENDOWMENTS

This Annex provides indicators of factors endowments for a sample of ten countries during the period 1960-1989. The countries in the sample differ, sometimes sharply, for their per capita income levels; they have been chosen because they all compete to penetrate the EC markets for the products exported by Morocco and Tunisia. The countries are:

CZE	-	Czechoslovakia
MAL	-	Malaysia
MOR	-	Morocco
PHI	-	Philippines
POL	-	Poland
POR	-	Portugal
SPA	-	Spain
THA	-	Thailand
TUN	-	Tunisia
TUR	-	Turkey

The information comes from a variety of sources, the World Bank Development Report, U.N. Statistical Yearbooks and files of published raw data.[1] References are given in of Chapter IV.

Most information is presented in index form. Indexes are constructed taking a benchmark country (usually the best performer) and rescaling actual values for other countries after setting to 100 the value in the benchmark country. The benchmark country's actual value of the variable is reported in the last row of the table.

1/ Some of the findings overlap with those of World Bank (1993), Kingdom of Morocco "Developing private industry", op. cit. Compared to that study this Annex provides a narrower set of factors but a larger variety of indicators and a longer period of time.

Table V.1: Per capita GDP

	1970	1980	1985	1988
Morocco	15	17	16	28
Tunisia	19	26	28	39
Spain	76	88	87	100
Portugal	45	53	50	72
Turkey	30	33	34	49
Poland	68	71	66	55
Czechoslovakia	100	100	100	n.a.
Malaysia	27	44	46	64
Thailand	18	24	26	39
Philippines	19	22	18	26
	CZE=5732	CZE=7002	CZE=7424	SPA=7406

Note: The index is based on raw data on per capita GDP levels, measured at 1980 international prices (except for 1988 data, which are at 1985 international prices).

Source: Summers-Heston (1988, 1991).

Table V.2: CAPITAL-LABOR RATIO INDEXES

1960	1970	1980	1985
SPA 100	SPA 100	SPA 100	MAL 109
MAL 74	MAL 55	MAL 72	SPA 100
TUR 55	POR 49	POR 56	POR 63
POR 53	TUR 41	TUR 49	POL 56
TUN 48	TUN 34	PHI 32	TUR 53
PHI 46	PHI 31	TUN 30	PHI 34
THA 26	THA 22	THA 22	TUN 34
	MOR 11	MOR 13	THA 26
			MOR 16
SPA=0.0091	SPA=0.0209	SPA=0.0310	SPA=0.0295

Note: The index is computed from raw data on capital labor ratios. Data on capital stocks in thousands of US dollars are from Benhabib-Spiegel (1992). Data on population aged 25 and over are from Barro-Lee (1993).

Table V.3: NO-SCHOOL ATTAINMENT			
1960	1970	1980	1985
TUN 100	TUN 100	TUN 100	TUN 100
TUR 63	POR 79	TUR 73	TUR 64
MAL 62	TUR 68	SPA 49	MAL 45
THA 51	MAL 48	MAL 48	POR 37
POR 48	THA 40	POR 38	THA 30
PHI 36	PHI 23	THA 28	PHI 14
SPA 26	SPA 15	PHI 16	SPA 8
POL 9	POL 6	POL 4	POL 4
CZE 1	CZE 1	CZE 0	CZE 1
TUN=94.0	TUN=85.2	TUN=72.1	TUN=66.3

Note: The variable indexed is the share of people aged 25 and over having attained no-schooling. Data are taken from Barro-Lee (1993). Data on Morocco are missing.

Table V.4: ILLITERACY RATE	
1985	1990
MOR 145	MOR 145
TUN 100	TUN 100
MAL 58	MAL 62
TUR 56	TUR 54
POR 35	POR 42
PHI 30	PHI 29
THA 19	THA 20
SPA 13	SPA 14
MOR=67	MOR=51

Note: The index is computed from raw data on illiteracy rates taken from the World Development Report, 1993.

Table V.5: NUMBER OF YEARS OF SCHOOLING

A. Data from Kyriacou (1991) & Psacharopoulos-Arriagade (1986)

1970	1980	1985
PHI 100	SPA 100 [100]	SPA 100
POR 80	PHI 95 [112]	PHI 91
SPA 74	POR 86 [72]	POR 67
MAL 67	MAL 66 [80]	TUR 65
THA 62	TUR 65 [82]	MAL 59
TUR 46	THA 59 [66]	TUN 58
TUN 42	TUN 56 [35]	THA 57
MOR 25	MOR 36 [19]	MOR 36
PHI=6.6	SPA=8.4 [6.2]	SPA=9.7

Note: The index is based on the average number of years of schooling taken from Kyriacou (1991). Figures in brackets are from Psacharoupoulos-Arriagade (1986).

B. Data from Barro-Lee (1991)

1970	1980	1985
CZE 100	CZE 100	CZE 100
POL 86	POL 91	POL 89
PHI 54	PHI 64	PHI 69
SPA 54	SPA 48	SPA 60
THA 40	MAL 48	MAL 53
MAL 36	THA 40	THA 52
TUR 24	POR 34	POR 39
POR 14	TUR 28	TUR 34
TUN 11	TUN 20	TUN 27
CZE=8.8	CZE=9.4	CZE=9.4

Note: The index is based on the average number of years of schooling reported in Barro-Lee (1993). Data on Morocco missing.

Table V.6: EDUCATIONAL ATTAINMENT

A. Secondary Level

1970	1980	1985
CZE 183	CZE 136	CZE 117
POL 100	POL 100	POL 100
PHI 73	MAL 74	MAL 82
MAL 41	PHI 60	PHI 60
TUR 34	SPA 43	SPA 60
SPA 32	TUN 36	TUN 45
TUN 26	POR 34	POR 42
THA 18	TUR 29	TUR 34
POR 11	THA 17	THA 22
POL=8.2	POL=13.3	POL=14.6

Note: The index is based on the share of people aged 25 and over who enrolled the secondary school for at least one year reported in Barro-Lee (1993). Data for Morocco are missing.

B. Higher Levels

1970	1980	1985
PHI 100	PHI 100	PHI 100
POL 76	CZE 52	CZE 55
CZE 56	POL 49	POL 55
SPA 34	SPA 40	THA 43
MAL 31	THA 30	SPA 34
THA 18	TUR 20	TUN 21
TUR 14	POR 17	TUR 20
TUN 13	TUN 16	POR 18
POR 8	MAL 12	MAL 15
PHI=6.2	PHI=9.9	PHI=11.6

Note: The index is based on the share of people aged 25 and over who enrolled higher-than-second levels of schooling for at least one year reported in Barro-Lee (1993). Data for Morocco are missing.

Table V.7: COMPLETION RATIO		
1970	1980	1985
TUN 100	TUN 100	TUN 100
POL 98	CZE 98	CZE 97
MAL 97	POL 97	POL 95
CZE 95	MAL 97	MAL 95
PHI 75	PHI 73	PHI 73
TUR 67	SPA 63	SPA 64
SPA 64	TUR 63	TUR 63
POR 56	POR 55	POR 53
TUN=89	TUN=89	TUN=89

Note: The completion ratio is calculated for people aged 25 and over as the ratio between the number of those who reached a certain educational attainment and the total number of people enrolled that level of education for at least one year. The index is based on actual completion ratios taken from Barro-Lee (1993). Data for Morocco are missing.

Table V.8: TELEPHONE DENSITY			
1970	1980	1985	1989
CZE 102	SPA 100	SPA 100	SPA 100
SPA 100	CZE 80	CZE 64	POR 63
POR 62	POR 51	POR 50	CZE 47
POL 42	POL 34	POL 31	TUR 34
TUR 12	TUR 11	MAL 22	POL 27
MAL 12	MAL 11	TUR 18	MAL 26
TUN 12	TUN 10	TUN 10	TUN 11
MOR 8	PHI 5	THA 4	THA 7
PHI 5	MOR 4	PHI 4	MOR 4
THA 3	THA 3	MOR 4	PHI 3
SPA=135	SPA=220	SPA=363	SPA=304

Note: The index is based on the number of telephones per 1000 inhabitants published in UN Statistical Yearbooks. Data for 1989 are reported in Italtel, Communications Atlas 1992, and are not strictly comparable with those for previous years.

Table V.9: ELECTRICAL POWER GENERATING CAPACITY		
1983	1985	1989
CZE 100	CZE 100	CZE 100
POL 60	POL 60	POL 61
SPA 43	SPA 44	SPA 53
POR 43	POR 43	POR 49
PHI 13	PHI 14	PHI 14
THA 8	THA 9	TUR 13
MAL 7	MAL 8	THA 12
TUR 6	TUR 8	MAL 9
TUN 4	TUN 6	TUN 6
MOR 3	MOR 3	MOR 3
CZE=143.1	CZE=152.7	CZE=162.0

Note: The index is based on the data on raw data in thousand kilowatts per squared kilometer reported in the UN Energy Statistics Yearbook.

Table V.10: RAILWAYS TRAFFIC			
1970	1980	1985	1989
CZE 100	CZE 100	CZE 100	CZE 100
POL 67	POL 76	POL 67	POL 63
SPA 4	SPA 4	SPA 4	SPA 4
POR 2	POR 2	POR 2	POR 3
TUN 2	TUN 2	TUN 2	TUN 2
TUR 1	MOR 1	MOR 2	MOR 2
MOR 1	TUR 1	TUR 2	TUR 2
THA 1	THA 1	THA 1	THA 1
MAL 1	MAL 1	MAL 0	MAL 1
PHI 0	PHI 0	PHI 0	PHI 0
CZE=476.5	CZE=567.5	CZE=575.0	CZE=562.4

Note: The index is based on the data on railways traffic (measured as million tons-kilometers per square kilometer) reported in U.N. Statistical Yearbooks.

Table V.11: ROAD DENSITY		
1983	**1985**	**1990**
POL 100	POL 100	POL 100
SPA 66	SPA 66	SPA 68 (**)
PHI 54	CZE 60	SPA 55
TUR 41	PHI 56	CZE 49
MAL 22	TUR 42	PHI 45 (***)
TUN 15	MAL 24	TUR 40
THA 15	THA 17	TUN 15 (**)
MOR 8	TUN 16	THA 12 (**)
	MOR 8 (*)	MAL 10 (**)
		MOR 7 (**)
POL=0.96	POL=0.96	POL=1.16

(*) 1986; (**) 1989; (***) 1988.
Note: The index is based on road density data (kilometers of total network per square kilometer) reported in UN Energy Statistics Yearbooks.

Table V.12: AIR TRAFFIC		
1985	**1988**	**1991**
SPA 100	SPA 100	SPA 100
MAL 57	MAL 53	MAL 55
PHI 32	PHI 34	THA 27
THA 26	THA 27	PHI 24
TUR 18	POR 19	POR 18
POR 17	TUR 18	TUR 12
POL 15	POL 15	POL 8
MOR 13	CZE 11	CZE 8
CZE 12	MOR 7	MOR 7
TUN 8	TUN 6	TUN 5
SPA=182	SPA=207	SPA=263

Note: The index is based on the total number of departures (in thousands) of domestic and international flights from the country's airports.